Broadcast & A/V Solutions Guide

[Edition 3]

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Digital and Analogue Video Cables

For digital applications where high frequency response and impedance tolerance are critical, such as SDI, HDTV and S/PDIF. Miniature cables are generally used over shorter distances where size and weight are important factors. Standard size RG59/U cables can be used over longer distances, and RG6/U and RG11/U cables are suitable for long run higher bandwidth applications.

Miniature RG59/U

Single Coax - Solid

BELDEN SENDING ALL THE RIGHT SIGNALS

Construction

Bare Copper Conductor with Gas-injected Foam HDPE Insulation, Tinned Copper Braid Shield and PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
179DT	1	28.5 AWG Solid .012"	Duobond® Foil (100%) + 95% TC Braid	2.54	75	77	57.4
1855A	1	23 AWG Solid .023"	Duofoil® + 95% TC Braid	4.03	75	82	53.5

*Available in Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Grey or White.

ROADWORX BY MADISON TECHNOLOGIES

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW310123	1	23 AWG Solid .023"	Dual Al Foil + 95% TC Braid	4.0	75	83	53

*Available in Black or Blue

Single Coax - Stranded

BELDEN SENDING ALL THE RIGHT SIGNALS

Construction

Bare Copper Conductor with Gas-injected Foam HDPE Insulation, Tinned Copper Braid Shield and PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1865A	1	25 AWG Strandard (19x37).021"	Duofoil® + 95% TC Braid	3.81	75	82	54.1

*Available in Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Grey or White.

Miniature RG59/U (cont.)

Bundled Miniature for RGB applications

BELDEN SENDING ALL THE RIGHT SIGNALS

Construction

Bare Copper Conductors with Gas-injected Foam HDPE Insulation, Tinned Copper Braid Shield and Overall Matte Black PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
7787A	3	23 AWG Solid .023"	Duobond® Foil (100%) + 95% TC Braid	10.97	75	83	54.1
7788A	4	23 AWG Solid .023"	Duobond® Foil (100%) + 95% TC Braid	12.22	75	83	54.1
7789A	5	23 AWG Solid .023"	Duobond® Foil (100%) + 95% TC Braid	13.69	75	83	54.1
7790A	6	23 AWG Solid .023"	Duobond® Foil (100%) + 95% TC Braid	15.16	75	83	54.1
7791A	10	23 AWG Solid .023"	Duobond® Foil (100%) + 95% TC Braid	20.22	75	83	54.1
7792A	12	23 AWG Solid .023"	Duobond® Foil (100%) + 95% TC Braid	20.96	75	83	54.1

ROADWORX BY MADISON TECHNOLOGIES

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW320323	3	23 AWG Solid .023"	Dual Al Foil + 95% TC Braid	11.0	75	83	53
RW320423	4	23 AWG Solid .023"	Dual Al Foil + 95% TC Braid	12.2	75	83	53
RW320523	5	23 AWG Solid .023"	Dual Al Foil + 95% TC Braid	13.7	75	83	53
RW320623	6	23 AWG Solid .023"	Dual Al Foil + 95% TC Braid	14.7	75	83	53

Mini Hi-Res Component Video

Applications

RGB Projectors, LCD Projectors, Video Distribution, Component Video, Graphic Displays, Special Effects Editing, Animation, Video Post Production, Home Theatre, Offices, Boardrooms, Auditoriums, Teleconferencing, Theatres.

Construction

Tinned Copper Conductors with FPFA Insulation, Tinned Copper Interlocked Shield, PVC Inner Jacket, and PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1279R	5	25 AWG Solid .018"	Duobond® Foil (100%) + 95% TC Braid	10.24	75	80	55.6

Bundled Miniature - Banana Peel Style

Applications

RGB, VGA, SVGA, XGA, SXGA, UXGA, HDTV, LCD, Plasma, Digital Signage, Component Video, Video Mult, Animation, Special Effects, Suitable for use in Risers.

Construction

Bare Copper Conductors with Gas-injected Foam HDPE Insulation, Tinned Copper Braid Shield and Individual PVC Jackets.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1855S3	3	23 AWG Solid .023"	Duofoil® Foil (100%) + 95% TC Braid	Single 4.03 Overall 8.7	75	83	53.5
1855S5	5	23 AWG Solid .023"	Duofoil® Foil (100%) + 95% TC Braid	Single 4.03 Overall 10.9	75	83	53.5
1855S6	6	23 AWG Solid .023"	Duofoil® Foil (100%) + 95% TC Braid	Single 4.03 Overall 12.1	75	83	53.5

Single Coax

Construction

Bare Copper Conductor with Gas-injected Foam HDPE Insulation, Tinned Copper Braid Shield and PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1505A	1	20 AWG Solid .032"	Duofoil® (100%) + 95% TC Braid	5.94	75	83	53.1
1505F	1	22 AWG Stranded (7x29) .031"	Double TC Braid Shield 95% coverage	6.15	75	80	55.7

*Available in Brown, Red, Orange, Yellow, Green, Blue, Violet, Grey, White or Black. Note: Black suitable for indoor and outdoor aerial applications. Other colours suitable for indoor use only.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW310120	1	20 AWG Solid	Dual Al Foil + 95% TC Braid	5.94	75	83	53

Bundled for RGB applications

Construction

Bare Copper Conductors with Gas-injected Foam HDPE Insulation, Tinned Copper Braid Shield and Overall Matte Black PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
7794A	3	20 AWG Solid .032"	Duofoil® (100%) + 95% TC Braid	16.03	75	83	53.1
7795A	4	20 AWG Solid .032"	Duofoil® (100%) + 95% TC Braid	17.93	75	83	53.1
7796A	5	20 AWG Solid .032"	Duofoil® (100%) + 95% TC Braid	20.07	75	83	53.1
7798A	10	20 AWG Solid .032"	Duofoil® (100%) + 95% TC Braid	29.62	75	83	53.1

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW320520	5	20 AWG Solid .032"	Dual Al Foil + 95% TC Braid	20.1	75	83	53

RG59/U (cont.)

Bundled - Banana Peel Style

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Applications

RGB, VGA, SVGA, XGA, SXGA, UXGA, HDTV, LCD, Plasma, Digital Signage, Component Video, Video Mult, Animation, Special Effects, Suitable for use in Risers.

Construction

Bare Copper Conductors with Gas-injected Foam HDPE Insulation, Tinned Copper Braid Shield and Individual PVC Jackets.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1505S3	3	20 AWG Solid .032"	Duofoil® (100%) + 95% TC Braid	Single 5.92 Overall 12.8	75	83	53.5
1505S5	5	20 AWG Solid .032"	Duofoil® (100%) + 95% TC Braid	Single 5.92 Overall 16.0	75	83	53.5
1505S6	6	20 AWG Solid .032"	Duofoil® (100%) + 95% TC Braid	Single 5.12 Overall 17.8	75	83	53.5

RG6/U

Single Coax - Solid

BELDEN SENDING ALL THE RIGHT SIGNALS

Applications

For digital applications where high frequency response and impedance tolerance are critical, such as SDI and HDTV applications.

Construction

Bare Copper Conductor with Gas-injected Foam HDPE Insulation, Tinned Copper Braid Shield and PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1694A	1	18 AWG Solid .040"	Duofoil® (100%) + 95% TC Braid	6.99	75	82	53.1

*Available in Brown, Red, Orange, Yellow, Green, Blue, Violet, Grey, White or Black. Note: Black suitable for indoor and outdoor aerial applications. Other colours suitable for indoor use only.

ROADWORX BY MADISON TECHNOLOGIES

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW310118	1	18 AWG Solid .040"	Dual Al Foil + 95% TC Braid	7.0	75	82	53

*Available in Black and Blue

RG6/U (cont.)

Single Coax - Stranded

BELDEN SENDING ALL THE RIGHT SIGNALS

Applications

For digital applications where high frequency response and impedance tolerance are critical, such as SDI and HDTV applications.

Construction

Bare Copper Conductor with Gas-injected Foam HDPE Insulation, Tinned Copper Braid Shield and PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1694F	1	19 AWG Stranded (7x27)	Double TC Braid Shield 99% Coverage	7.0	75	81	53.2

*Available in Red, Orange, Yellow, Green, Blue, Violet, White or Black. Note: Black suitable for indoor and outdoor aerial applications. Other colours suitable for indoor use only.

Bundled for RGB applications

BELDEN SENDING ALL THE RIGHT SIGNALS

Construction

Bare Copper Conductors with Gas-injected Foam HDPE Insulation, Tinned Copper Braid Shield and Overall Matte Black PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
7710A	3	18 AWG Solid .040"	Duofoil® + 95% TC Braid	19.56	75	82	53.1
7711A	4	18 AWG Solid .040"	Duofoil® + 95% TC Braid	22.86	75	82	53.1
7712A	5	18 AWG Solid .040"	Duofoil® + 95% TC Braid	23.93	75	82	53.1
7713A	10	18 AWG Solid .040"	Duofoil® + 95% TC Braid	35.20	75	82	53.1

RG11/U

Low Loss Serial Digital Coax

BELDEN SENDING ALL THE RIGHT SIGNALS

Construction

Bare Copper Conductor with Gas-injected Foam HDPE Insulation, Tinned Copper Braid Shield and PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
7731A	1	14 AWG Solid .064"	Duofoil® + 95% TC Braid	10.3	75	85	52.4

*Available in Brown, Red, Orange, Yellow, Green, Blue, Violet, Grey, White or Black. Note: Black suitable for indoor and outdoor aerial applications. Other colours suitable for indoor use only.

Low Skew UTP

Low skew UTP for Video Transmission

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Applications

Zero Skew, Low Skew, RJ45 UTP Based Video Applications (not for data transmission requiring TIA/EIA Category qualifications) RGB.

Construction

NanoSkew™, Twisted Pair Solid Bare Copper Conductors, Non-Plenum, Polyolefin Insulation, Rip Cord, Maroon PVC Jacket.

Part No	No. of Pairs	Stranding	Nom. OD (mm)	Nom. Imp. Ω	Max DCR (Ω/ 100m)
7987R	4	24 AWG Solid	4.95	100	9.0

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Part No	No. of Pairs	Stranding	Nom. OD (mm)	Nom. Imp. Ω	Max DCR (Ω/ 100m)
RW640424	4	24 AWG Solid	4.95	100	9.0

Hi-Res Component Video

Mini Hi-Res Component Video Cable - Banana Peel Style

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Applications

RGB, VGA, SVGA, XGA, SXGA, UXGA, HDTV, LCD, Plasma, Digital Signage, Component Video, Video Mult, Animation, Special effects.

Construction

Bare Copper Conductors with Gas-injected Foam HDPE or Insulation, Tinned Copper Interlocked Serve Shield and Inner PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1281S3	3	Minature 25 AWG Solid .018"	Duobond® Foil + TC Interlocked Shield (100%)	Single 2.9 Overall 6.2	75	81	55.8
1281S4	4	Minature 25 AWG Solid .018"	Duobond® Foil + TC Interlocked Shield (100%)	Single 2.9 Overall 7.0	75	81	55.8
1281S5	5	Minature 25 AWG Solid .018"	Duobond® Foil + TC Interlocked Shield (100%)	Single 2.9 Overall 7.8	75	81	55.8
1281S6	6	Minature 25 AWG Solid .018"	Duobond® Foil + TC Interlocked Shield (100%)	Single 2.9 Overall 8.7	75	81	55.8

Note: Also available with Plenum, Foam FEP Insulation, Flamarrest® Jacket.

Hi-Res Component Video Cable (cont.)

Hi-Res Component Video Cable - Banana Peel Style

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Applications

RGB, VGA, SVGA, XGA, SXGA, UXGA, HDTV, LCD, Plasma, Digital Signage, Component Video, Video Mult, Animation, Special Effects, Suitable for use in Plenum spaces.

Construction

Bare Copper Conductors with Foam FEP Insulation, Tinned Copper Braid Shield and Flamarrest® Jackets, Centre Spline Binder.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1283S3	3	20 AWG Solid .032"	Duofoil® (100%) + 95% TC Braid	Single 4.8 Overall 10.7	75	84	52.8
1283S5	5	20 AWG Solid .032"	Duofoil® (100%) + 95% TC Braid	Single 4.8 Overall 13.4	75	84	52.8
1283S6	6	20 AWG Solid .032"	Duofoil® (100%) + 95% TC Braid	Single 4.8 Overall 14.9	75	84	52.8

SVGA Cable

SVGA Cable

Applications

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For VGA and SVGA applications where separate twisted pairs as well as coaxial cables are required for sync and control applications.

Part No	No. of Cond.	Stranding	Shielding Materials	Sheath Material	Nom. OD (mm)	Nom. Imp. Ω	Nom. Cap. pF/m
RW43SVGA	3 Way Coax + 7 Single Cores	Coax 28 AWG + Single Cores 24 AWG	Overall Al Foil plus 85% Braid	Soft PVC	8.2	75	20

High Flex S-Video Cables

High Flex S-Video

Parallel Zip

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Applications

For interconnection between S-video or S-VHS capable devices.

Construction

Parallel Zip Construction with Tinned Copper Conductors, Foam HDPE Insulation, Spiral Tinned Copper Serve Shield and Black PVC Jacket. (One Coax Printed and Striped for Identification)

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1807A	2	30 AWG Stranded (7x38) .012"	Spiral TC Serve Shield (90%)	2.79 x 5.84	75	78	56.7

Round

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Construction

Round Construction with Tinned Copper Conductors, Foam HDPE Insulation, Spiral Tinned Copper Serve Shield and Soft Black PVC Jacket. (Inner PVC Jackets Colour Code: Black and Yellow)

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1808A	2	30 AWG Stranded (7x38) .012"	Spiral TC Serve Shield (90%)	6.47	75	78	56.7

ROADWORX BY MADISON TECHNOLOGIES

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW200230	2	30 AWG Stranded	Spiral TC Shield	6.5	75	78	57

Broadband Coaxial Cables

For installation of CATV and similar systems. All of the cables listed below carry approvals for use in Australia on Foxtel installations.

RG6 Quad Screen

Construction

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Solid Bare Copper-Covered Steel Conductor, Gas-Injected Foam Polyethylene Insulation, Dual Aluminium Foil Shield (60% and 40% coverage), and Black PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1189A	1	18 AWG Solid .040"	Duobond® IV Quad Shield	7.57	75	83	53.1

Garland BY MADISON TECHNOLOGIES

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
CC6QS	1	18 AWG Solid	Bond Al Foil + Dual Al Foil	7.56	75	84	53.2

RG11 Quad Screen

Construction

BELDEN SENDING ALL THE RIGHT SIGNALS

Solid Bare Copper-Covered Steel Conductor, Gas-Injected Foam Polyethylene Insulation, Dual Aluminium Foil Shield (60% and 40% coverage), and Black PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1617A	1	14 AWG Solid .064"	Duobond® IV Quad Shield	10.34	75	83	53.1

Garland BY MADISON TECHNOLOGIES

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
CC11QS	1	14 AWG Solid	Bond Al Foil + Dual Al Foil	10.3	75	84	53.2

Triaxial Cables

Video Triax Cable

Triaxial cable is used to interconnect video cameras to related equipment. Triax cables contain 2 isolated shields and a solid or stranded centre conductor. Isolated shields allow the triax to provide multiple functions over 1 cable through multiplexing techniques. Examples include: DC power to camera , intercom to operator, teleprompter feeds, monitoring feeds and even automatic or robotic functions.

Solid Core

Part No	Stranding	Insulation	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
7801A	19 AWG Solid 0.039" Silver-Plated Copper	Gas Injected Foam PE	Silver Plated Copper + Bare Copper Braid	8.4	75	81	54.7
8232A	20 AWG Solid .032" Bare Copper	Gas Injected Foam HDPE	Bare Copper Braids (95%)	8.00	75	83	53.1

Flexible

Construction

Silver Plated Copper Conductors, Foam PE Insulation, Silver Plated Copper Braid, Overall Bare Copper Braid Shields, Inner PVC Jacket, and Red Outer Belflex® PVC Jacket.

Part No	Stranding	Insulation	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
7783A	20 AWG Stranded (19x32)	Foam PE	SPC Braid + Overall BC Braid Shield	8.40	75	80	55.4
7784AS	16 AWG Solid	Foam PE	SPC Braid + Overall BC Braid Shield	11	75	81	55.3
7784A	16 AWG Stranded (19x29)	Foam PE	SPC Braid + Overall BC Braid Shield	11	75	82	54.1

Analogue Video Coaxial Cables

RG59/U

For transmission of Analogue video signals. Both solid and stranded conductor designs are available, with stranded used typically for applications where flexing may be required. See also Digital and Analogue Video Cables.

Single Coax - Solid

Part No	No. of Coax	Stranding	Insulation	Shielding & Sheath Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
8241	1	23 AWG Solid .023" BCCS	PE	BC Braid 95% Shield & Black PVC Jacket*	6.15	75	66	67.3
YR23769	1	23 AWG Solid BC	Solid PE	2 x TC Braids 95% & 94% & White PVC Jacket	6.3	75	66	68.9
8281	1	20 AWG Solid .031" BC	PE	TC Double Braid 98% & Polyethylene Jacket*	7.75	75	66	65.6

* Available in Red, Yellow, Green, Light Blue, White, Orange or Black

Part No	No. of Coax	Stranding	Insulation	Shielding & Sheath Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW410123	1	23 AWG Solid	PE	BC Braid 95% Shield & Black PVC Jacket	6.15	75	66	67
RW420123	1	23 AWG Solid	Solid PE	2 x TC Braids 95% & 94% & White PVC Jacket	6.3	75	66	68

Single Coax - Stranded

Part No	No. of Coax	Stranding	Insulation	Shielding & Sheath Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
9259	1	22 AWG (7x30) .030" BC	Foam PE	BC Braid Shield 95% & Non Contaminating PVC Jacket	6.12	75	78	56.7

Part No	No. of Coax	Stranding	Insulation	Shielding & Sheath Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW400122	1	22 AWG Stranded	Foam PE	BC Braid Shield 95%	6.15	75	78	57

RG6/U

Single Coax

BELDEN SENDING ALL THE RIGHT SIGNALS

Construction

Solid Bare Copper Conductor with Dual Foil and Tinned Copper Braid Shield with Gas-Injected Foam HDPE Insulation with Black PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
9248	1	18 AWG Solid .040" BC	Duofoil® + 60% TC Braid	6.86	75	82	53.1

Bundled RGB Coax

RGB coaxial cables are used for sending red, green and blue signals through separate coaxial cables in component video applications. This type of video transmission provides a sharper, clearer picture than does the composite video format.

BELDEN SENDING ALL THE RIGHT SIGNALS

High Flex RGB

Applications

Ideal for use in graphics, animation and computer display applications. These bundled coaxial cables are available in 3, 4, or 5 conductor versions and are colour coded for easy identification. Cable selection depends on whether the component transmission is RGB (3 cdr.), RGB and Sync (4 cdr.), or RGB, Sync and Hold (5 cdr.).

Construction

Stranded (7x34) Bare Copper Conductor with Dual Foil, Tinned Copper Braid, Foam HDPE Insulation and Overall Matte Black PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1406B	3	26 AWG Stranded (7x34) .019" BC	Duofoil® + 93% TC Braid	9.86	75	78	56.7
1407B	4	26 AWG Stranded (7x34) .019" BC	Duofoil® + 93% TC Braid	11.56	75	78	56.7
1417B	5	26 AWG Stranded (7x34) .019" BC	Duofoil® + 93% TC Braid	12.12	75	78	56.7

Bundled RGB Coax (cont.)

CM Rated

BELDEN SENDING ALL THE RIGHT SIGNALS

Construction

Stranded (7x34) Bare Copper Conductor with Dual Foil, Tinned Copper Braid, Overall Polyester Tape, Foam HDPE Insulation, Overall Black PVC Jacket and Inner PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1164B	3	26 AWG Stranded .019" BC	Duofoil® + 93% TC Braid & Overall Poly Tape	9.86	75	78	56.7
1167B	4	26 AWG Stranded .019" BC	Duofoil® + 93% TC Braid & Overall Poly Tape	11.56	75	78	56.7
1418B	5	26 AWG Stranded .019" BC	Duofoil® + 93% TC Braid & Overall Poly Tape	12.12	75	78	56.7

50 Ohm Coaxial Cables

Transmission cables are used for low and high power radio frequency (RF) connections. Examples include radio antenna tower connections, CB and cellular phone antenna connections and microwave transmitter and receiver applications.

Low Loss RG8/U

Single Coax - Solid

BELDEN SENDING ALL THE RIGHT SIGNALS

Construction

Solid Bare Copper Conductor with Duobond II® + Tinned Copper Braid, Semi-Solid Ployethylene Insulation and Black PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
9913	1	10 AWG Solid .108" BC	Duobond II® + TC Braid (90% Coverage)	10.29	50	84	80.7

RG58/U

Single Coax - Stranded

BELDEN
SENDING ALL THE RIGHT SIGNALS

Construction

Stranded (19x33) Tinned Copper Conductor with 95% Tinned Copper Braid, Foam Polyethylene Insulation and Black PVC Jacket.

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
8259	1	20 AWG Stranded .035" TC	TC Braid Shield 95%	4.88	50	66	101.0

Garland
BY MADISON TECHNOLOGIES

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
CC58	1	20 AWG 19/018 TC	TC Braid	4.95	50	66	101

RG213

Single Coax - Stranded

Garland
BY MADISON TECHNOLOGIES

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
CC213	1	13 AWG 7/0.70 BC	BC Braid	10.3	50	66	101

RG174

Single Coax - Stranded

Garland
BY MADISON TECHNOLOGIES

Part No	No. of Coax	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
CC174	1	26 AWG 7/0.16 Copper Clad Steel	TC Braid	2.6	50	66	101

Analogue Audio Cables

Analogue Audio Install

Single and Double Pair

BELDEN
SENDING ALL THE RIGHT SIGNALS

Applications

Analogue audio cables are used for connecting line level audio equipment in either permanent or semi-permanent installations. Paired cables allow balanced signal transmission, which results in lower crosstalk through common mode rejection.

Part No	No of Pairs	Stranding	Insulation	Shielding & Sheath Materials	Nom. OD (mm)	Nom. Cap. pF/m
9501	1	24 AWG Stranded (7x32) TC	Semi-Rigid Polyvinyl Chloride	Twisted Pair Overall 100% Beldfoil® Shield	3.96	131* 243**
1883A	1	24 AWG Stranded (7x32) TC	PE	Twisted Pair Overall 100% Beldfoil® Shield	3.12	102* 190**
8761	1	22 AWG Stranded (7x30) TC	PE	Twisted Pair Overall 100% Beldfoil® Shield	4.45	79* 154**
8451	1	22 AWG Stranded (7x30) TC	PE and Paper Wrap	Twisted Pair Overall 100% Beldfoil® Shield	3.51	112* 220**
8762	1	20 AWG Stranded (7x28) TC	PE	Twisted Pair Overall 100% Beldfoil® Shield	5.18	89* 161**
8760	1	18 AWG Stranded (16x30) TC	PE	Twisted Pair Overall 100% Beldfoil® Shield	5.64	79* 144**
9502	2	24 AWG Stranded (7x32) TC	Semi-Rigid Polyvinyl Chloride	Twisted Pair Overall 100% Beldfoil® Shield	5.64	98* 164**
8723	2	22 AWG Stranded (7x30) TC	PE	Twisted Pairs Individually Shielded wtih 100% Beldfoil®	4.06	115* 203**
1504A	2	22 AWG Stranded (19x34) TC	PVC	Dual Twisted Pairs Overall 100% Beldfoil® Shield	3.63 x 7.26	187* 328**

ROADWORX
BY MADISON TECHNOLOGIES

Part No	No of Pairs	Stranding	Insulation	Shielding & Sheath Materials	Nom. OD (mm)	Nom. Cap. pF/m
RW210122	1	22 AWG Stranded	PVC	Aluminium Foil 100%, PVC Jkt	4.5	79* 154**
RW250126	1	26 AWG Stranded	PVC	Spiral Shield, PVC Jkt	2.9 x 5.8	169
RW210222	2	22 AWG Stranded	PVC	Aluminium Foil 100%, PVC Jkt	4.3	115* 203**
RW250222	2	22 AWG Stranded	PVC	Aluminium Foil 100%, PVC Jkt	3.65	185* 330**

* Capacitance between conductors
** Capacitance between one conductor and other conductors connected to shield.

Multi-pair, Overall Screen / RS-232 Control Cables

Paired cables allow balanced signal transmission, which results in lower crosstalk through common mode rejection.

Applications

For installation and connecting of multi-channel Analogue audio equipment in permanent installations, where only overall foil shielding is required. Also used in RS-232 control systems.

Construction

Stranded (7x32) Tinned Copper Conductors, Twisted Pairs, Overall Beldfoil® Shield (100% Coverage), 24 AWG, Stranded Tinned Copper Drain Wire.

Part No	No. of Pairs	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
9503	3	24 AWG Stranded (7x32) TC	Twisted Pair Overall 100% Beldfoil® Shield	5.89	75	60	98* 164**
9504	4	24 AWG Stranded (7x32) TC	Twisted Pair Overall 100% Beldfoil® Shield	6.73	75	60	98* 164**
9505	5	24 AWG Stranded (7x32) TC	Twisted Pair Overall 100% Beldfoil® Shield	7.34	75	60	98* 164**
9506	6	24 AWG Stranded (7x32) TC	Twisted Pair Overall 100% Beldfoil® Shield	7.34	75	60	98* 164**
9508	8	24 AWG Stranded (7x32) TC	Twisted Pair Overall 100% Beldfoil® Shield	8.23	75	60	98* 164**
9510	10	24 AWG Stranded (7x32) TC	Twisted Pair Overall 100% Beldfoil® Shield	9.34	75	60	98* 164**
9525	25	24 AWG Stranded (7x32) TC	Twisted Pair Overall 100% Beldfoil® Shield	12.8	75	60	98* 164**

* Capacitance between conductors
** Capacitance between one conductor and other conductors connected to shield.

Analogue Multi-Pair Snake

Snake cables are used to connect multiple audio channels in low-level (microphone) and high-level (line) componentry such as console board equipment for recording studios, radio and television stations, post production facilities, and sound system installations.

Flexible, Individually Shielded and Jacketed Pairs

Construction

Stranded (7x32) Tinned Copper Conductor, Polyolefin Insulation, Twisted Pairs Individual Beldfoil® Shield (100% Coverage) and numbered and colour coded PVC Jackets. Overall Beldfoil® Shield and 24 AWG Tinned Copper Drain Wire, plus Overall Matte Black PVC Jacket and Nylon Rip Cord.

Analogue Multi-Pair Snake (cont.)

Part No	No. of Pairs	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1510C	4	24 AWG Stranded (7x32) TC	Individually Shielded with 100% Beldfoil®	8.94	50	66	102* 191**
1511C	6	24 AWG Stranded (7x32) TC	Individually Shielded with 100% Beldfoil®	10.61	50	66	102* 191**
1512C	8	24 AWG Stranded (7x32) TC	Individually Shielded with 100% Beldfoil®	11.48	50	66	102* 191**
1513C	12	24 AWG Stranded (7x32) TC	Individually Shielded with 100% Beldfoil®	14.25	50	66	102* 191**
1514C	16	24 AWG Stranded (7x32) TC	Individually Shielded with 100% Beldfoil®	15.95	50	66	102* 191**
1515C	20	24 AWG Stranded (7x32) TC	Individually Shielded with 100% Beldfoil®	19.56	50	66	102* 191**
1516C	24	24 AWG Stranded (7x32) TC	Individually Shielded with 100% Beldfoil®	20.5	50	66	102* 191**
1517C	26	24 AWG Stranded (7x32) TC	Individually Shielded with 100% Beldfoil®	20.9	50	66	102* 191**
1518C	32	24 AWG Stranded (7x32) TC	Individually Shielded with 100% Beldfoil®	22.78	50	66	102* 191**
1519C	52	24 AWG Stranded (7x32) TC	Individually Shielded with 100% Beldfoil®	28.37	50	66	102* 191**

* Capacitance between conductors
** Capacitance between one conductor and other conductors connected to shield.

Part No	No. of Pairs	Strand.	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW220224	2	24 AWG Stranded	Individually Shielded with Al. Foil 100%	7.1	50	66	72
RW220424	4	24 AWG Stranded	Individually Shielded with Al. Foil 100%	8.4	50	66	72
RW220624	6	24 AWG Stranded	Individually Shielded with Al. Foil 100%	10.1	50	66	72
RW220824	8	24 AWG Stranded	Individually Shielded with Al. Foil 100%	11.2	50	66	72
RW221224	12	24 AWG Stranded	Individually Shielded with Al. Foil 100%	13.6	50	66	72
RW221624	16	24 AWG Stranded	Individually Shielded with Al. Foil 100%	15.2	50	66	72
RW222424	24	24 AWG Stranded	Individually Shielded with Al. Foil 100%	20.1	50	66	72

CMR Rated, Individually Shielded and Jacketed Pairs

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SENDING ALL THE RIGHT SIGNALS

Construction

Stranded (7x30) Tinned Copper Conductor, Polyolefin Insulation, Twisted Pairs Individual Beldfoil® Shield (100% Coverage) and numbered and colour coded PVC Jackets. Overall Beldfoil® Shield and 18 AWG Tinned Copper Drain Wire, plus Overall Black PVC Jacket and Nylon Rip Cord.

Part No	No. of Pairs	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1408R	4	24 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	8.79	50	66	102* 191**
1409R	6	24 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	10.46	50	66	102* 191**
1410R	8	24 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	11.33	50	66	102* 191**
1411R	12	24 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	14.10	50	66	102* 191**
1412R	16	24 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	15.80	50	66	102* 191**
1413R	20	24 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	17.88	50	66	102* 191**
1414R	24	24 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	20.35	50	66	102* 191**
1415R	26	24 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	20.73	50	66	102* 191**
1416R	32	24 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	22.61	50	66	102* 191**

* Capacitance between conductors
** Capacitance between one conductor and other conductors connected to shield.

Analogue Multi-Pair Snake (cont.)

Individually Shielded Pairs

BELDEN
SENDING ALL THE RIGHT SIGNALS

Construction

Stranded (7x30) Tinned Copper Conductor, Polypropylene Insulation, Twisted Pairs Individually Beldfoil® Shielded (100% Coverage). Overall PVC Jacket and 22 AWG Stranded Tinned Copper Drain Wire.

Part No	No. of Pairs	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
8777	3	22 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	6.93	50	66	98* 180**
8778	6	22 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	9.19	50	66	98* 180**
8774	9	22 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	10.59	50	66	98* 180**
9768	12	22 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	11.79	50	66	98* 180**
8776	15	22 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	13.92	50	66	98* 180**
9769	17	22 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	14.66	50	66	98* 180**
8769	19	22 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	15.32	50	66	98* 180**
8773	27	22 AWG Stranded (7x30) TC	Individually Shielded with 100% Beldfoil®	18.00	50	66	98* 180**

* Capacitance between conductors
** Capacitance between one conductor and other conductors connected to shield.

ROADWORX
BY MADISON TECHNOLOGIES

Part No	No. of Pairs	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW230222	2	22 AWG Stranded	Individually Shielded with Al. Foil 100%	4.9	50	66	98* 180**
RW230422	4	22 AWG Stranded	Individually Shielded with Al. Foil 100%	7.4	50	66	98* 180**
RW230622	6	22 AWG Stranded	Individually Shielded with Al. Foil 100%	8.6	50	66	98* 180**
RW230822	8	22 AWG Stranded	Individually Shielded with Al. Foil 100%	9.6	50	66	98* 180**
RW231222	12	22 AWG Stranded	Individually Shielded with Al. Foil 100%	11.0	50	66	98* 180**
RW231622	16	22 AWG Stranded	Individually Shielded with Al. Foil 100%	12.8	50	66	98* 180**
RW232422	24	22 AWG Stranded	Individually Shielded with Al. Foil 100%	15.3	50	66	98* 180**

* Capacitance between conductors
** Capacitance between one conductor and other conductors connected to shield.

Super Flexible, Individually Shielded and Jacketed Pairs

BELDEN
SENDING ALL THE RIGHT SIGNALS

Construction

Stranded (41x40) Bare Copper Conductor, Polyolefin Insulation, Twisted Pairs Individually Shielded with Double Serve "French Braid" with Tinned Copper Drain Wire and Overall Black PVC Jacket.

Part No	No. of Pairs	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1902A	2	24 AWG Stranded (41x40) BC	Bare Copper French Braid (93%)	8.38	60	66	85* 154**
1904A	4	24 AWG Stranded (41x40) BC	Bare Copper French Braid (93%)	8.45	60	66	85* 154**
1906A	6	24 AWG Stranded (41x40) BC	Bare Copper French Braid (93%)	11.40	60	66	85* 154**
1908A	8	24 AWG Stranded (41x40) BC	Bare Copper French Braid (93%)	12.20	60	66	85* 154**
1912A	12	24 AWG Stranded (41x40) BC	Bare Copper French Braid (93%)	15.30	60	66	85* 154**
1916A	16	24 AWG Stranded (41x40) BC	Bare Copper French Braid (93%)	17.30	60	66	85* 154**
1924A	24	24 AWG Stranded (41x40) BC	Bare Copper French Braid (93%)	21.00	60	66	85* 154**

ROADWORX
BY MADISON TECHNOLOGIES

Part No	No. of Pairs	Stranding	Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW240424	4	24 AWG Stranded	Bare Copper Spiral Shield	9.6	60	66	85.6* 156**
RW240624	6	24 AWG Stranded	Bare Copper Spiral Shield	11.7	60	66	85.6* 156**
RW240824	8	24 AWG Stranded	Bare Copper Spiral Shield	13.0	60	66	85.6* 156**
RW241224	12	24 AWG Stranded	Bare Copper Spiral Shield	15.0	60	66	85.6* 156**
RW241624	16	24 AWG Stranded	Bare Copper Spiral Shield	17.5	60	66	85.6* 156**
RW242024	20	24 AWG Stranded	Bare Copper Spiral Shield	19.0	60	66	85.6* 156**
RW242424	24	24 AWG Stranded	Bare Copper Spiral Shield	22.0	60	66	85.6* 156**

* Capacitance between conductors
** Capacitance between one conductor and other conductors connected to shield.

AES/ EBU Cables

The Audio Engineering Society (U.S.) and the European Broadcast Union have established an international standard, called AES/EBU. The detailed specifications of this standard are:

Sampling Rate: from 32 KHz to 192 KHz
Bandwidth: from 4.096 MHz to 24.5 MHz
Impedance: 110Ω ± 20%

The key difference between twisted pair specifications for digital audio cable and standard analogue audio cable is the impedance specification. AES/EBU, with its broad tolerance, allows cables with impedances from 88 ohms to 132 ohms to be used. Standard analogue audio cable impedance is 45 ohms to 70 ohms. This potential amount of mismatch can result in signal reflections and jitter, causing bit errors at the receiver.

Single and Double Pair

BELDEN
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Part No	No. of Pairs	Stranding	Insulation & Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
9180	1	26 AWG Stranded (7x34) .018" TC	Datalene® with Beldfoil® Shield (100%) & PVC Jacket	3.66	110	76	43* 85**
1800B	1	24 AWG Stranded (7x32) TC	Datalene® with Beldfoil® Shield (100%) & PVC Jacket	4.57	110	76	39* 85**
1800F	1	24 AWG Stranded (42x40) BC	Datalene® with TC French Braid Shield (95%) & Matte PVC Jkt	5.35	110	76	39* 85**
1802B	2	24 AWG Stranded (7x32) TC	Datalene® with Beldfoil® Shield (100%) & PVC Zip-Cord Jacket	4.57 x 9.14	110	76	39* 85**
9729	2	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	6.76	100	76	41* 76.1**

ROADWORX
BY MADISON TECHNOLOGIES

Part No	No. of Pairs	Stranding	Insulation & Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW110124	1	24 AWG Stranded	Aluminium Foil & PVC Jacket	4.5	110	82	31
RW130224	2	24 AWG Stranded	Aluminium Foil with Polyester Tape & PVC Jacket	7.8	110	66	51

* Capacitance between conductors
** Capacitance between one conductor and other conductors connected to shield.

Multipair Snake Cables - Individually Shielded Pairs

BELDEN SENDING ALL THE RIGHT SIGNALS

Construction

Stranded (7x32) Tinned Copper Conductor, Datalene® Insulation, Twisted Pairs Individually Beldfoil® Shielded (100% Coverage). Overall PVC Jacket and 24 AWG Stranded Tinned Copper Drain Wire.

Part No	No. of Pairs	Stranding	Insulation & Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
9730	3	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	8.48	100	76	41* 76.1**
9728	4	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	9.22	100	76	41* 76.1**
9731	6	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	10.69	100	76	41* 76.1**
9732	9	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	12.40	100	76	41* 76.1**
9733	11	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	14.61	100	76	41* 76.1**
9734	12	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	14.61	100	76	41* 76.1**
9735	15	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	16.23	100	76	41* 76.1**
9736	17	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	17.04	100	76	41* 76.1**
9737	19	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	17.04	100	76	41* 76.1**
9738	27	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	20.24	100	76	41* 76.1**

ROADWORX BY MADISON TECHNOLOGIES

Part No	No. of Pairs	Stranding	Insulation & Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
RW130424	4	24 AWG Stranded	Aluminium Foil (100%) with Soft PVC Jacket	9.3	110	66	51
RW130624	6	24 AWG Stranded	Aluminium Foil (100%) with Soft PVC Jacket	11.2	110	66	51
RW130824	8	24 AWG Stranded	Aluminium Foil (100%) with Soft PVC Jacket	12.2	110	66	51
RW131224	12	24 AWG Stranded	Aluminium Foil (100%) with Soft PVC Jacket	15.3	110	66	51
RW131624	16	24 AWG Stranded	Aluminium Foil (100%) with Soft PVC Jacket	17.0	110	66	51
RW132424	24	24 AWG Stranded	Aluminium Foil (100%) with Soft PVC Jacket	21.2	110	66	51

* Capacitance between conductors
** Capacitance between one conductor and other conductors connected to shield.

AES/ EBU Cables (cont.)

Multipair Snake Cables - Individually Shielded & Jacketed Pairs

BELDEN SENDING ALL THE RIGHT SIGNALS

Construction

26 AWG or 24 AWG Stranded Tinned Copper Conductor, Datalene® Insulation. Pairs Individually Shielded with Bonded Beldfoil®. Pair Jackets and Shields are Bonded so both strip simultaneously with automatic stripping equipment. Overall Foil Shield plus Overall Violet PVC Jacket and Nylon Rip Cord.

Part No	No. of Pairs	Stranding	Insulation & Shielding Materials	Nom. OD (mm)	Nom. Imp. Ω	Nom. Vel. of Prop. %	Nom. Cap. pF/m
1803F	4	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	12.39	110	76	39* 86**
7890A	4	26 AWG Stranded (7x34) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	10.13	110	76	41* 82**
1805F	8	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	16.79	110	76	39* 86**
7880A	8	26 AWG Stranded (7x34) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	13.74	110	76	41* 82**
1806F	12	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	21.06	110	76	39* 86**
7892A	12	26 AWG Stranded (7x34) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	17.25	110	76	41* 82**
1850F	16	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	23.98	110	76	39* 86**
7893A	16	26 AWG Stranded (7x34) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	19.56	110	76	41* 82**
1852F	24	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	30.61	110	76	39* 86**
1854F	32	24 AWG Stranded (7x32) TC	Datalene® with IS Beldfoil® Shields (100%) & PVC Jacket	34.19	110	76	39* 86**

* Capacitance between conductors
** Capacitance between one conductor and other conductors connected to shield.

Microphone and Musical Instrument Cables

Flexible and rugged cables for connecting of low level microphones and musical instruments in semi-permanent and stage-redeployment applications.

High Impedance, High Conductivity

Part No	No. of Cond.	Stranding	Insulation & Shielding Materials	Jacket	Nom. OD (mm)	Nom. Cap. pF/m
9778	1	20 AWG Stranded (26x34) TC	EPDM Rubber, Conductive Textile (100%) + TC Spiral Shield (75%) + Paper Tape	Black Neoprene	5.97	148
9395	1	18 AWG Stranded (41x34) TC	EPDM Rubber, Conductive Textile (100%) + TC Spiral Shield (68%) + Paper Tape	Black Neoprene	5.97	180

Low Impedance, High Conductivity

Part No	No. of Cond.	Stranding	Insulation & Shielding Materials	Jacket	Nom. OD (mm)	Nom. Cap. pF/m
8412	2	20 AWG Stranded (26x34) TC	EPDM Rubber + Rayon Braid + TC Braid Shield (85%) + Cotton Wrap	EPDM	6.65	98* 180**
8413	2	24 AWG Stranded (45x40) TC Alloy	EPDM Rubber, Conductive Textile (100%) + TC Braid Shield (56%) + Cotton Spiral	Black EPDM	5.05	98* 180**

Part No	No. of Cond.	Stranding	Insulation & Shielding Materials	Jacket	Nom. OD (mm)	Nom. Cap. pF/m
RW200120	2	20 AWG Stranded	Cotton Wire (100%) + TC Braid (85%) + Paper Tape	Soft PVC Black Blue Green Red Yellow	6.7	98* 180**

* Capacitance between conductors
** Capacitance between one conductor and other conductors connected to shield.

Star Quad

Part No	No. of Cond.	Stranding	Insulation & Shielding Materials	Jacket	Nom. OD (mm)	Nom. Cap. pF/m
1172A	4	26 AWG Stranded (30x40) BC	Polyethylene Insulation, TC French Braid Shield (95%) + BC Drain Wire	Matte PVC	4.83	128* 187**
1192A	4	24 AWG Stranded (42x40) BC	Polyethylene Insulation, TC Braid Shield (95%)	Matte PVC	6.22	128* 187**
1804A	4	28 AWG Stranded (19x40) SPC	Polypropylene Insulation, TC Braid Shield (78%)	Matte PVC	2.92	131* 197**

Star Quad (cont.)

Part No	No. of Cond.	Stranding	Insulation & Shielding Materials	Jacket	Nom. OD (mm)	Nom. Cap. pF/m
RW20SQ24	4	24 AWG Stranded	Polyethylene Insulation, Cotton Wire + Cotton Paper + TC Braid Shield (95%)	Soft PVC	6.2	128* 188**

* Capacitance between conductors
** Capacitance between one conductor and other conductors connected to shield.

Speaker Cables

Speaker cables are used to connect receivers or power amplifers to speakers and are also used for the internal wiring of the speakers themselves. Suitable for use in commercial or domestic audio systems.

High Conductivity, Twisted Jacket

Part No	No. of Cond.	Stranding	Insulation	Jacket	Nom. OD (mm)
8461	2	18 AWG Stranded (7x26) TC	PVC	Chrome PVC	5.94
8471	2	16 AWG Stranded (19x29) TC	PVC	Chrome PVC	6.96
8473	2	14 AWG Stranded (42x30) TC	PVC	Chrome PVC	8.64
8477	2	12 AWG Stranded (65x30) TC	PVC	Chrome PVC	9.80

Oxygen Free, High Conductivity, Twisted Jacket

Part No	No. of Cond.	Stranding	Insulation	Jacket	Nom. OD (mm)	Nom. Cap. pF/m
1307A	2	16 AWG Stranded (65x34) BC	Polyolefin	PVC	5.33	65.3
1309A	2	14 AWG Stranded (105x34) BC	Polyolefin	PVC	6.71	67.3
1311A	2	12 AWG Stranded (168x34) BC	Polyolefin	PVC	8.94	73.2
1313A	2	10 AWG Stranded (259x34) BC	Polyolefin	PVC	10.87	76.1
1308A	4	16 AWG Stranded (65x34) BC	Polyolefin	PVC	6.86	65.3
1310A	4	14 AWG Stranded (105x34) BC	Polyolefin	PVC	8.10	67.3
1312A	4	12 AWG Stranded (168x34) BC	Polyolefin	PVC	10.74	73.2

High Flex Multi Conductor

Part No	No. of Cond.	Stranding	Insulation	Jacket	Nom. OD (mm)
1810A	4	14 AWG Stranded (104x34) BC	PVC Insulation + Conductors Cabled with Fillers + Paper Wrap	Matte Black PVC	9.91
1811A	8	14 AWG Stranded (104x34) BC	PVC Insulation + Conductors Cabled with Fillers + Paper Wrap	Matte Black PVC	13.08

High Flex Multi Conductor (cont.)

Part No	No. of Cond.	Stranding	Insulation	Jacket	Nom. OD (mm)
RW540811	8	11 AWG Stranded (4mm sq)	PVC + Cotton Tape	Black PVC	18.8
RW540411	4	11 AWG Stranded (4mm sq)	PVC + Cotton Tape	Black PVC	14.5
RW540414	4	13 AWG Stranded (2.5mm sq)	PVC + Cotton Tape	Black PVC	12.0

Economy Speaker Cables

Part No	No. of Cond.	Stranding	Construction	Jacket	Nom. OD (mm)
RW500214	2	14 AWG Stranded	Flat, Twin Sheathed	PVC Black	4.05 x 6.7
RW500216	2	16 AWG Stranded	Flat, Twin Sheathed	PVC Black	3.65 x 5.95
RW500218	2	18 AWG Stranded	Flat, Twin Sheathed	PVC Black White	3.3 x 5.4
RW520213	2	13 AWG Stranded	Flat, Fig. 8 Style	PVC Clear	4.5 x 9.0
RW530214	2	14 AWG Stranded	Round, Twisted	PVC Black	9.0
RW510414	4	14 AWG Stranded	Round, Twisted	PVC Black	9.6
RW510412/14	4	2 x 12 AWG Stranded & 2 x14 AWG Stranded	Round, Twisted	PVC Black	10.6

Control Cables

Paired cables allow balanced signal transmission, which results in lower crosstalk through common mode rejection. Due to the improved noise immunity of twisted pairs, they generally permit higher data speeds than multi-conductor cables.

DMX/RS-485

Applications

For Permanent installation, or re-deployment of DMX and RS-485 control cabling.

Construction

24 AWG Stranded (7x32) TC Conductors, Overall Beldfoil® (100% Coverage) and Tinned Copper Braid Shield (90% Coverage), 24 AWG Stranded Tinned Copper Drain Wire.

Part No	No. of Pairs	Stranding	Insulation	Jacket	Nom. OD (mm)	Nom. Cap. pF/m
9841	1	24 AWG Stranded (7x32) TC	Polyethylene	Chrome PVC	5.89	42.0* 75.5**
9842	2	24 AWG Stranded (7x32) TC	Polyethylene	Chrome PVC	8.64	42.0* 75.5**
9843	3	24 AWG Stranded (7x32) TC	Polyethylene	Chrome PVC	9.14	42.0* 75.5**
9844	4	24 AWG Stranded (7x32) TC	Polyethylene	Chrome PVC	9.91	42.0* 75.5**

Part No	No. of Pairs	Stranding	Shielding	Jacket	Nom. OD (mm)	Nom. Cap. pF/m
RW600124	1	24 AWG Stranded	Aluminium Foil + 90% Braid	Soft PVC	4.5	65
RW600224	2	24 AWG Stranded	Aluminium Foil + 90% Braid	Soft PVC	5.9	65

AxLink Cables

Applications

Data and Power Cable specifically for AxLink control systems.

Construction

1 x 22AWG screened pair (aluminium foil) with drain wire, and 2 x 18AWG conductors with overall PVC jacket.

Part No	No. of Cond.	No. of Pairs	Stranding	Jacket	Nom. OD (mm)
1502R	2	1	22 AWG Stranded (Pair) 18 AWG Stranded (Conductors)	FR PVC	6.35mm

Part No	No. of Cond.	No. of Pairs	Stranding	Jacket	Nom. OD (mm)
RW610222/18	2	1	22 AWG Stranded (Pair) 18 AWG Stranded (Conductors)	PVC	6.35mm

LAN and Ethernet Cables

Flexible Ethernet

Ultraflex Ethernet cable for semi-permanent or stage applications requiring a flexible screened cat 5e Ethernet type cable.

Part No	No. of Pairs	Stranding	Insulation	Jacket	Nom. OD (mm)	Max. Cap. Unbal. pF/m
1304A	4	24 AWG Bonded Pairs Stranded (7x32) BC	Non-Plenum Polyolefin	Black Industrial Grade PVC	6.22	66
1305A	4	24 AWG Bonded Pairs Stranded (7x32) BC	Non-Plenum Polyolefin	PVC Inner + Matte Black PVC Outer	7.49	66

Category 5e

For installation of premise type cabling requiring category 5e type cables.

Part No	No. of Pairs	Stranding	Insulation	Jacket	Nom. OD (mm)	Max. Cap. Unbal. pF/m
1583A	4 Pair UTP	24 AWG Solid BC	Polyolefin	PVC	4.95	33
JYJP37AA004	4 Pair UTP	24 AWG Stranded	Polyolefin	PVC	5.2	50
7812E	4 Pair Bonded UTP	23 AWG Solid BC	Polyolefin	Flexible PVC	6.5	50
1864A	25 Pair UTP	24 AWG Solid BC	Non-Plenum Polyolefin	PVC	13.36	33

Part No	No. of Pairs	Stranding	Insulation	Jacket	Nom. OD (mm)	Max. Cap. Unbal. pF/m
UTPL5E	4 Pair UTP	24AWG Solid BC	Polyethylene	F.R PVC	5.2	33
UTPL5EMTP	4 Pair UTP	7/0.20 Stranded BC	Polyethylene	PVC	5.1	33
FTP5E	4 Pair FTP	1/0.542 Solid BC	HDPE	PCV	6.5	33

Category 6

For installation of premise type cabling requiring category 6 type cables.

Part No	No. of Pairs.	Stranding	Insulation	Jacket	Nom. OD (mm)	Nom. Imp. Ω
1872A	4 Pair Bonded UTP	23 AWG Solid BC	Non-Plenum Polyolefin	PVC	9.27 x 4.19	100
7814A	4 Pair UTP	23 AWG Solid BC	Polyolefin	PVC	5.8	100

Part No	No. of Pairs.	Stranding	Insulation	Jacket	Nom. OD (mm)	Nom. Imp. Ω
UTPL6305RB	4 Pair UTP	Solid Annealed Copper	Polyethelene	PVC	7.0	100

Low Skew UTP for Video Transmission

Part No	No. of Pairs.	Stranding	Insulation	Jacket	Nom. OD (mm)	Max. Cap. Unbal. pF/100m
7987R	4 Pair UTP	24 AWG Solid BC	Non-Plenum Polyolefin	Maroon PVC	4.95	NA
7988R	4 Pair Cat5e Bonded UTP	24 AWG Solid BC	Non-Plenum Polyolefin	Green PVC	5.08	66
7989R	4 Pair Cat6 Bonded UTP	23 AWG Solid BC	Non-Plenum Polyolefin	Blue PVC	9.27 x 4.19	49.2

Part No	No. of Pairs.	Stranding	Insulation	Jacket	Nom. OD (mm)	Max. Cap. Unbal. pF/100m
RW640424	4 Pair UTP	24 AWG Solid BC	Non-Plenum Polyolefin	Maroon PVC	4.95	NA

Low Smoke Zero Halogen Cables

LSZH

LSZH or LSOH cables utilise cable jacketing that reduces the amount of toxic or corrosive gases emitted during combustion. These cables were traditionally specified for use in poorly ventilated areas such as aircraft or trains, but are becoming more common in commercial buildings in order for that building to achieve a higher "Green Star" rating. Green Star is a comprehensive, national, voluntary environmental rating scheme that evaluates the environmental design and achievements of buildings.

Part No	Cable Description	Non-LSZH Equivalent
1505ANH	Digital and Analogue Video Cable Single Coax, RG-59	1505A
YR52654	Digital and Analogue Video Cable 5 way bundled for RGBHV, Miniature RG-59	7789A
1694SB	Digital and Analogue Video Cable Single Coax, RG-6	1694A
7731SB	Digital and Analogue Video Cable Single Coax, RG-11	7731A
8723NH	Analogue Audio Installation Cable 2 Pair, 22AWG	8723
8761NH	Analogue Audio Installation Cable 1 Pair, 22AWG	8761
YR52459	Microphone Cable Star Quad, 24AWG	1192A
YM52709	High Conductivity Speaker Cable 2 Conductor, 12AWG	8477
8471NH	High Conductivity Speaker Cable 2 Conductor, 16AWG	8471
1583ENH	Category 5e Cable 4 Pair UTP	1583A
1633ENH	Category 5e Cable 4 Pair FTP (Screened)	1633A
7812ENH	Category 6 Cable 4 Pair UTP	7814A
7860ENH	Category 6 Cable 4 Pair FTP (Screened)	7860E
9501NH	RS232 Control Cable 1 Pair, 24AWG	9501
9842NH	DMX 512/RS485 Control Cable 2 Pair, 24AWG	9842
1512ENH	Analogue Audio Cable 8 Pair Individually Jacketed and Screened, 24AWG	1512C
1513ENH	Analogue Audio Cable 12 Pair Individually Jacketed and Screened, 24AWG	1513C

Section 2

Audio Connectors and Adaptors

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XLR Cable Connectors

Metal Shell Type - Solder

AC Series Connectors

Amphenol

Features

- Zinc Diecast Shell
- Solder Bucket Connections
- "Jaws" Cable Retention System
- Contact layouts in 3, 4, 5, 6A and 7
- Precision machined or Stamped contacts
- Leading first mate last break socket contact
- Quick and easy assembly without screws – by hand or portable termination tool (Part number T2860)

Options

- Stamped Contacts (3 contact only)
- Gold Plated Contacts
- Large or Small Jaws Cable Clamp
- Black Finish Shell
- Bulk Pack
- Coloured Boots / Backshells

Male

No of Contacts	Nickel Shell, Machined Contacts	Nickel Shell, Stamped Contacts	Black Shell, Machined Contacts	Black Shell, Stamped Contacts
3	AC3MM	AC3M	AC3MMB	AC3MB
4	AC4M	-	AC4MB	-
5	AC5M	-	AC5MB	-
6A	AC6AM	-	AC6AMB	-
7	AC7M	-	AC7MB	-

Options
- J denotes Large Cable Clamp - AU denotes Gold Plated Contacts
- BULK denotes Bulk Pack of 100 pieces
Example: AC3MM-AU

Female

No of Contacts	Nickel Shell, Machined Contacts	Nickel Shell, Stamped Contacts	Black Shell, Machined Contacts	Black Shell, Stamped Contacts
3	-	AC3F	-	AC3FB
4	-	AC4F	-	AC4FB
5	AC5F	-	AC5FB	-
6A	AC6AF	-	AC6AFB	-
7	AC7F	-	AC7FB	-

Options
-J denotes Large Cable Clamp - AU denotes Gold Plated Contacts
- BULK denotes Bulk Pack of 100 pieces
Example: AC3F-AU

Metal Shell Type - Solder (cont.)

AX Series Connectors

Amphenol

Features

- Unique Australian designed shell and housing
- Ergonomic stylish sleeve design for improved grip
- Oversized latch lever preserves your thumb
- Leading first mate last break pin 1 on socket connectors
- Chuck style cable clamp to suit 3mm - 8mm cable
- Overmolded cable support boot
- New socket contact design for improved contact resistance
- Precision machined pin contacts as standard
- Compact 2.5mm2 (14AWG) solder buckets to reduce soldering time and wastage
- Zinc diecast shell housing with Satin nickel or Matt black finish
- Available in 3 contact only
- RoHS Complaint

Options

- Gold Plated Contacts
- Black Finish Shell
- Bulk Pack
- Coloured Boots / I.D Sleeves

Male

No of Contacts	Nickel Shell, Machined Contacts	Nickel Shell, Gold Plated Contacts	Black Shell, Machined Contacts	Black Shell, Gold Plated Contacts
3	AX3M	AX3M-AU	AM3MB	AX3MB-AU

Options
BULK denotes Bulk Pack of 100 pieces
Example: AX3M BULK

Female

No of Contacts	Nickel Shell	Nickel Shell, Gold Plated Contacts	Black Shell, Machined Contacts	Black Shell, Gold Plated Contacts
3	AX3F	AX3F-AU	AX3FB	AX3FB-AU

Options
BULK denotes Bulk Pack of 100 pieces
Example: AX3F BULK

XX Series Connectors

Meeting the requirements of all major broadcasting authorities, this range of connectors has been designed for professional, industrial and commercial applications, whereever realiability and performance is the foremost requirement. Neutrik unique chuck-type self-adjusting strain relief prevents damage to the cable sleeve.

Features

- Rugged Diecast Shell
- Rear Insert
- Robust and Compact Design (shortest available XLR cable connector)
- Time Saving Assembly (only 4 pieces, not set screws)
- World Accepted Standard
- UL Recognised Component

Options

- Gold Plated Contacts
- Black Finish Shell
- Bulk Pack
- Coloured Rings

Male

No of Contacts	Nickel Shell, Silver Contacts	Black Shell, Silver Contacts	Black Shell, Gold Contacts
3	NC3MXX	NC3MXX-BAG	NC3MXX-B
4	NC4MXX	NC4MXX-BAG	NC4MXX-B
5	NC5MXX	NC5MXX-BAG	NC5MXX-B
6A	NC6MXX	NC6MXX-BAG	NC6MXX-B
6B*	NC6MSXX	NC6MSXX-BAG	NC6MXXS-B
7	NC7MXX	NC7MXX-BAG	NC7MXX-B

* 6B is Switchcraft Compatible Pin Configeration

Female

No of Contacts	Nickel Shell, Silver Contacts	Black Shell, Silver Contacts	Black Shell, Gold Contacts
3	NC3FXX	NC3FXX-BAG	NC3FXX-B
4	NC4FXX	NC4FXX-BAG	NC4FXX-B
5	NC5FXX	NC5FXX-BAG	NC5FXX-B
6A	NC6FXX	NC6FXX-BAG	NC6FXX-B
6B*	NC6FSXX	NC6FSXX-BAG	NC6FSXX-B
7	NC7FXX	NC7FXX-BAG	NC7FXX-B

* 6B is Switchcraft Compatible Pin Configuration

AES/EBU Digital Series Connectors

The Digital XLR is a 3-Pole connector that allows the transmission of digital audio signals, according to AES3, efficiently and reliably. Requires 6.5mm hex crimp die.

Nickel Shell with Gold Contacts

Type	Nickel shell, Gold contacts
Male	NC3MX-CC
Female	NC3FX-CC

Features

Amphenol

- Thermoplastic Shell
- Solder Bucket Connections
- "Jaws" Cable Retention System
- Precision machined or Stamped contacts
- Leading first mate last break socket contact
- Quick and easy assembly without screws – by hand or portable termination tool. (Part number T2860)

Options

- Stamped Contacts (3 contact only)
- Gold Plated Contacts
- Large or Small Jaws Cable Clamp
- Black Finish Shell
- Bulk Pack
- Coloured Boots / Backshells 3, 4, 5, 6A and 7 Contacts

Male

Contact Type	Standard	Gold Plated	Large Cable Clamps
Machined	AC3MMCP	AC3MMCP-AU	AC3MMCPJ
Stamped	AC3MCP	AC3MCP-AU	AC3MCPJ

Note: Thermoplastic shell connectors are also available in 4 - 7 contact arrangements. Please contact us for ordering code.

Female

Contact	Standard	Gold Plated Contacts	Large Cable Clamps
Stamped	AC3FCP	AC3FCP-AU	AC3FCPJ

Note: Thermoplastic shell connectors are also available in 4 - 7 contact arrangements. Please contact us for ordering code.

Metal Shell Type - IDC

Amphenol

The Insulation Displacement Contact (IDC) connector is ideal for OEM's and end users alike and offers an alternative to our standard solder connector. Connectors can be quickly and easily assembled without screws or a soldering iron – by hand or portable termination tool (Part number T2860). Labour savings of up to 60% in termination time can be achieved.

XLR 3 Pole

Features

- Zinc Diecast Shell
- Available in 3 Contact only
- Insulation Displacement Contacts (IDC - Solderless)
- "Jaws" Cable Retention System
- Leading first mate last break socket contact

Options

- Gold Plated Contacts
- Black Finish Shell
- Bulk Pack
- Coloured Boots / Backshells

Male

Contact Type	Nickel Finish	Black Finish
IDC Contacts	AC3MI	AC3MIB
Options - AU denotes Gold Plated Contacts Example: AC3M1-AU		

Female

Contact Type	Nickel Finish	Black Finish
IDC Contacts	AC3FI	AC3FIB
Options - AU denotes Gold Plated Contacts Example: AC3F1-AU		

Thermoplastic Shell Type - IDC

Amphenol

The Insulation Displacement Contact (IDC) connector is ideal for OEM's and end users alike and offers an alternative to our standard solder connector. Connectors can be quickly and easily assembled without screws or a soldering iron – by hand or portable termination tool (Part number T2860). Labour savings of up to 60% in termination time can be achieved.

XLR 3 Pole

Features

- Thermoplastic Shell
- Available in 3 Contact only
- Insulation Displacement Contacts (IDC - Solderless)
- "Jaws" Cable Retention System
- Leading first mate last break socket contact
- Quick and easy assembly without screws – by hand or portable termination tool (Part number T2860)

Options

- Gold Plated Contacts
- Bulk Pack
- Coloured Boots / Backshells

Male

Standard	Gold Plated Contacts
AC3MCPI	AC3MCPI-AU

Female

Standard	Gold Plated Contacts
AC3FCPI	AC3FCPI-AU

Right Angle XLR Cable Connectors

NEUTRIK CONNECTING THE WORLD

Compact low profile right-angle connectors with Neutrik `chuck-principle` cable clamp. Seven selectable cable outlet positions.

Male

No of Contacts	Nickel Shell, Silver Contacts	Black Shell, Silver Contacts	Black Shell, Gold Contacts
3	NC3MRX	NC3MRX-BAG	NC3MRX-B
4	NC4MRX	NC4MRX-BAG	NC4MRX-B
5	NC5MRX	NC5MRX-BAG	NC5MRX-B
6A	NC6MRX	NC6MRX-BAG	NC6MRX-B
6B*	NC6MRXS	NC6MRXS-BAG	NC6MRXS-B
7	NC7MRX	NC7MRX-BAG	NC7MRX-B

* 6B is Switchcraft Compatible Pin Configeration

Right Angle XLR Cable Connectors (cont.)

Female

No of Contacts	Nickel Shell, Silver Contacts	Black Shell, Silver Contacts	Black Shell, Gold Contacts
3	NC3FRX	NC3FRX-BAG	NC3FRX-B
4	NC4FRX	NC4FRX-BAG	NC4FRX-B
5	NC5FRX	NC5FRX-BAG	NC5FRX-B
6A	NC6FRX	NC6FRX-BAG	NC6FRX-B
6B*	NC6FRXS	NC6FRXS-BAG	NC6FRXS-B
7	NC7FRX	NC7FRX-BAG	NC7FRX-B

* 6B is Switchcraft Compatible Pin Configuration

XLR Chassis Mount Connectors

Metal D Type Flange

AC Series Connectors

Amphenol

Features

- Zinc Diecast Shell
- D size housing can be front or rear mounted using the same panel cutout
- Solder Bucket connections
- Vertical PCB mounting (not available in 4 contact female)
- Precision machined or Stamped contacts (3 pin only)
- Leading first mate last break socket contact
- Positive latch lock system

Options

- Stamped Contacts (3 Contact Only)
- Gold Plated Contacts
- Vertical PCB Contacts
- Black Finish
- Non-Latching (Female Only)

Male

No of Contacts	Nickel Shell, Machined Contacts	Nickel Shell, Stamped Contacts	Black Shell, Machined Contacts	Black Shell, Stamped Contacts
3	AC3MMDZ	AC3MDZ	AC3MMDZB	AC3MDZB
4	AC4MDZ	-	AC4MDZB	-
5	AC5MDZ	-	AC5MDZB	-
6A	AC6AMDZ	-	AC6AMDZB	-
7	AC7MDZ	-	AC7MDZB	-

Options
- J denotes Large Cable Clamp - AU denotes Gold Plated Contacts
BULK denotes Bulk Pack of 100 pieces - V denotes Vertical PCB
Example: AC3MMDZ-AU

Metal D Type Flange (cont.)

Female

Amphenol

No of Contacts	Nickel Shell, Machined Contacts	Nickel Shell, Stamped Contacts	Black Shell, Machined Contacts	Black Shell, Stamped Contacts
3	-	AC3FDZ	-	AC3FDZB
4	-	AC4FDZ	-	AC4FDZB
5	AC5FDZ	-	AC5FDZB	-
6A	AC6AFDZ	-	AC6AFDZB	-
7	AC7FDZ	-	AC7FDZB	-

Options
- J denotes Large Cable Clamp - AU denotes Gold Plated Contacts
BULK denotes Bulk Pack of 100 pieces - V denotes Vertical PCB
Example: AC3FDZ-AU

D Series Connectors

"D" series features male and female chassis mount models that fit in the same hole cut-out and are front or rear mountable. These are a 1 piece unit, with solder cup terminations. Accessories include male and female rubber dust covers (SCDF and SCDM), Blank plates (DBA) and colour coded labelling plates (DSS).

Male

No of Contacts	Nickel Shell, Silver Contacts	Black Shell, Silver Contacts	Black Shell, Gold Contacts
3	NC3MD-LX	NC3MD-LX-BAG	NC3MD-LX-B
4	NC4MD-LX	NC4MD-LX-BAG	NC4MD-LX-B
5	NC5MD-LX	NC5MD-LX-BAG	NC5MD-LX-B
6A	NC6MD-LX	NC6MD-LX-BAG	NC6MD-LX-B
6B*	NC6MDS-LX	–	NC6MDS-LX-B
7	NC7MD-LX	–	NC7MD-LX-B

* 6B is Switchcraft Compatible Pin Configeration

Female

No of Contacts	Nickel Shell, Silver Contacts	Black Shell, Silver Contacts	Black Shell, Gold Contacts
3	NC3FD-LX	NC3FD-LX-BAG	NC3FD-LX-B
4	NC4FD-LX	NC4FD-LX-BAG	NC4FD-LX-B
5	NC5FD-LX	NC5FD-LX-BAG	NC5FD-LX-B
6A	NC6FD-LX	NC6FD-LX-BAG	NC6FD-LX-B
6B*	NC6FDS-LX	NC6FDS-LX-BAG	NC6FDS-LX-B
7	NC7FD-LX	NC7FD-LX-BAG	NC7FD-LX-B

* 6B is Switchcraft Compatible Pin Configeration

Metal P Type Flange

AC Series Connectors

Amphenol

Features

- Zinc Diecast Shell
- P size housing is the original wide flange front mounting XLR connector PN is the narrow, front mounting male connector
- Solder Bucket connections
- Vertical PCB mounting
- Precision machined or Stamped contacts (3 pin only)
- Leading first mate last break socket contact
- Positive latch lock system

Options

- Stamped Contacts (3 Contact Only)
- Gold Plated Contacts
- Vertical PCB Contacts
- Black Finish
- Non-Latching (Female Only)

Male

No of Contacts	Flange Type	Nickel Shell, Machined Contacts	Black Shell, Machined Contacts	Nickel Shell, Stamped Contacts	Black Shell, Stamped Contacts
3	Narrow	AC3MMPNZ	AC3MMPNZB	AC3MPNZ	AC3MPNZB
	Wide	AC3MMP	AC3MMPB	AC3MP	AC3MPB
4	Narrow	AC4MPNZ	AC4MPNZB	-	-
	Wide	AC4MP	AC4MPB	-	-
5	Narrow	AC5MPNZ	AC5MPNZB	-	-
	Wide	AC5MP	AC5MPB	-	-
6A	Narrow	AC6AMPNZ	AC6AMPNZB	-	-
	Wide	AC6AMP	AC6AMPB	-	-
7	Narrow	AC7MPNZ	AC7MPNZB	-	-
	Wide	AC7MP	AC7MPB	-	-

Options
- J denotes Large Cable Clamp - AU denotes Gold Plated Contacts - BULK denotes Bulk Pack of 100 pieces - V denotes Vertical PCB
Example: AC3MMPNZ-J

Female

No of Contacts	Flange Type	Nickel Shell, Machined Contacts	Black Shell, Machined Contacts	Nickel Shell, Stamped Contacts	Black Shell, Stamped Contacts
3	Wide	-	-	AC3FPZ	AC3FPZB
4	Wide	-	-	AC4FPZ	AC4FPZB
5	Wide	AC5FPZ	AC5FPZB	-	-
6	Wide	AC6AFPZ	AC6AFPZB	-	-
7	Narrow	AC7FPZ	AC7FPZB	-	-

Options
- J denotes Large Cable Clamp - AU denotes Gold Plated Contacts - BULK denotes Bulk Pack of 100 pieces - V denotes Vertical PCB
Example: AC5PZ-J

Metal P Type Flange (cont.)

P Series Connectors

NEUTRIK CONNECTING THE WORLD

Neutrik "P" series features a 1 piece metal design with large solder cups. The insert is non-removable, and is front mountable only. The male and female versions have different mounting dimensions.

Male

No of Contacts	Nickel Shell, Silver Contacts	Black Shell, Silver Contacts	Black Shell, Gold Contacts
3	NC3MP	NC3MP-BAG	NC3MP-B
4	NC4MP	NC4MP-BAG	NC4MP-B
5	NC5MP	NC5MP-BAG	NC5MP-B
6a	NC6MP	NC6MP-BAG	NC6MP-B

Female

No of Contacts	Nickel Shell, Silver Contacts	Black Shell, Silver Contacts	Black Shell, Gold Contacts
3	NC3FP-1	NC3FP-1-BAG	NC3FP-1-B
4	NC4FP-1	NC4FP-1-BAG	NC4FP-1-B
5	NC5FP-1	NC5FP-1-BAG	NC5FP-1-B
6a	NC6FP-1	NC6FP-1-BAG	NC6FP-1-B
6b	NC6FPS-1	-	-
7	NC7FP-1	-	NC7FP-1-B

XLR High Power Connectors

EP Series Connectors

Amphenol

The EP Series has set the standard in high performance speaker connectors. Apart from its durability and strength, it offers consistent superior power handling capabilities.

Features

- Solder Bucket termination
- Precision machined contacts
- Diecast Metal Housings
- High current contacts for distortion free signal
- Tough, durable zinc diecast shell for the EP series
- Available in 3, 4, 5, 6 and 8 contact arrangements
- Cable clamp capable of supporting cables from 9mm (0.35") to 16mm (0.63") in diameter
- Quick release, vibration resistant latch lock
- EP Cable Connectors are supplied with two different boots for different cable diameters

Options

- Cable or chassis mount

Cable Connector - Solder

Amphenol

Male

No of Contacts	Nickel Shell, Machined Contacts	Black Shell, Machined Contacts
3	EP-3-12	EP-3-12B
4	EP-4-12	EP-4-12B
5	EP-5-12	EP-5-12B
6	EP-6-12	EP-6-12B
8	EP-8-12	EP-8-12B

Female

No of Contacts	Nickel Shell, Machined Contacts	Black Shell, Machined Contacts
3	EP-3-11P	EP-3-11PB
4	EP-4-11P	EP-4-11PB
5	EP-5-11P	EP-5-11PB
6	EP-6-11P	EP-6-11PB
8	EP-8-11P	EP-8-11PB

Chassis Mount - Solder

Male

No of Contacts	Round Flange, Nickel Shell, Machined Contacts	Round Flange, Black Shell, Machined Contacts
3	EP-3-14	EP-3-14B
4	EP-4-14	EP-4-14B
5	EP-5-14	EP-5-14B
6	EP-6-14	EP-6-14B
8	EP-8-14	EP-8-14B

Female

No of Contacts	Nickel Shell, Machined Contacts	Black Shell, Machined Contacts	Nickel Shell, Stamped Contacts	Black Shell, Stamped Contacts
3	EP-3-13P	EP-3-13PB	-	-
4	EP-4-13P	EP-4-13PB	-	-
5	EP-5-13P	EP-5-13PB	-	-
6	EP-6-13P	EP-6-13PB	-	-
8	EP-8-13PT	EP-8-13PBT	EP-8-13P	EP-8-13PB

Cable Connector - Solder

Amphenol

The AP Series provides the same power handling performance as the EP Series in a cost effective, yet durable Thermoplastic housing.

Features

- Solder Bucket connections
- Precision machined contacts
- Thermoplastic Housings
- High current contacts
- Male & Female Cable and Chassis connectors available
- Black Shell

Male

No of Contacts	Thermoplastic Shell, Machined Contacts
4	AP-4-12
5	AP-5-12
6	AP-6-12
8	AP-8-12

Female

No of Contacts	Thermoplastic Shell, Machined Contacts
4	AP-4-11
5	AP-5-11
6	AP-6-11
8	AP-8-11

Chassis Mount - Solder

Features

- Solder Bucket connections
- Precision machined contacts
- Thermoplastic Housings
- High current contacts
- Male & Female Cable and Chassis connectors available
- Black Shell

Round Flange

Male

No of Contacts	Thermoplastic Shell, Machined Contacts
4	AP-4-14
5	AP-5-14
6	AP-6-14
8	AP-8-14

Female

No of Contacts	Thermoplastic Shell, Machined Contacts
4	AP-4-13
5	AP-5-13
6	AP-6-13
8	AP-8-13

Male

No of Contacts	Thermoplastic Shell, Machined Contacts
4	AP-4-22
5	AP-5-22
6	AP-6-22
8	AP-8-22

AP Series Connectors (cont.)

Rectangular Flange

Amphenol

Female

No of Contacts	Thermoplastic Shell, Machined Contacts
4	AP-4-21
5	AP-5-21
6	AP-6-21
8	AP-8-21

XLR Patch Panels

XLR Type Patch Panels

ROADWORX BY MADISON TECHNOLOGIES

A range of Black Powercoated 19" Panels to suit Amphenol "D" Flange or Neutrik "D" Series connectors. Available with or without integrated loom bar, these panels can be configured with a customized mix of male and female XLR's as well as any other "D" series connectors such as RCA, BNC or Ethercon type.

Call Madison Technologies with your custom requirement.

Also available as unloaded panels in the following configurations.

Part No	Description	Loom Bar
RWPPXLR81U	8 way, 1RU	No
RWPPXLR121U	12 way, 1RU	No
RWPPXLR161U	16 way, 1RU	No
RWPPXLR242U	24 way, 2RU	No
RWPPXLR322U	32 way, 2RU	No
RWPPXLR483U	48 way, 3RU	No
RWPPXLR161U-LB	16 way, 1RU	Yes
RWPPXLR322U-LB	32 way, 2RU	Yes

Professional Speaker Connectors

Speakon ® Series

Extremely reliable and robust connectors in 2, 4 and 8 pole versions, these feature the Neutrik unique chuck style strain relief.

Speakon® Cable Connectors

FC series

NEUTRIK CONNECTING THE WORLD

Features

- Up to 30A rms current rating
- Glass reinforced materials for housing and inserts
- Unique Neutrik chuck type strain relief
- Precise keyway for secure mating
- Accurate twist lock latching system

No of Poles	Part No	Description
2	NL2FC	2 Pole Cable Connector with locking ring. Integrated cable clamp. Intermates with 4-pole chassis connector and makes contact with +1/-1
4	NL4FC	4 Pole Cable Connector with latch lock
8	NL8FC	8 Pole Cable Connector with latch lock

NL8FC

SPX Series

Featuring higher current rating for operation of audio systems delivering more than 1000 watts.

Features

- Easy and extremely precise locking system "Quick Look"
- Improved grip on latch
- 1 piece strain relief, chuck for cable for 6 to 14.5 mm cable O.D
- Colour coding possible
- Integrated Design guaranties "Made by Neutrik®"
- Up to 50 A rms current rating
- Only 3 parts to assemble
- High impact materials

Straight

No of Poles	Part No	Bushing Colour
4	NL4FX	Blue
4	NL4FX-2	Red
4	NL4FX-4	Yellow
4	NL4FX-5	Green
4	NL4FX-9	White

Right Angle

No of Poles	Part No	Bushing Colour
4	NL4FRX	Blue

STX Series

Designed to be used in harsh environments, and are extremely rugged, weatherproof and durable. Features include metal housing and built in gaskets.

Features

- Up to 50A rms current rating
- All metal housing
- IP54 Sealing Gasket
- Only 3 Parts – easy to assemble

Speakon® Cable Connectors (cont.)

No of Poles	Part No	Male/Female	Finish
4	NLT4FX	Female	Nickel Metal
4	NLTFFX-BAG	Female	Black Chrome
4	NLT4MX	Male	Nickel Metal
4	NLT4MX-BAG	Male	Black Chrome
8	NLT8FX	Female	Nickel Metal
8	NLT8FX-BAG	Female	Black Chrome

NLT4MX

NLT4FX-BAG

Speakon® Adaptors

Part No	Description
NA4LJX	Adapter, Speakon Cable Connector to 2 Pole ¼" Jack
NL4MMX	4 Pole Lockable Coupler
NL8MM	8 Pole Coupler

NA4LJX

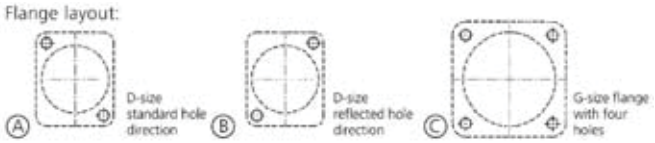
NL4MMX

NL8MM

Speakon® Chassis Connector

Features

- Standard version up to 30 A rms, ultra hight current version up to 50 A rms
- Glass reinforced materials
- Precise keyway for secure mating
- Accurate twist lock latching system
- Metal front plate (8-pole) or metal insert in locking area (2 & 4-pole)
- Various mounting and wiring possibilities
- "Air tight design", optimized for speaker applications
- D or G panel cutouts to be easily mounted on audio industry standard panels



Speakon® Chassis Connector (cont.)

Solder/Faston Termination

No of Poles	Part No	Flange Size & Layout	Hole Layout	Colour	Wiring (Flat Tab Size)
2	NL2MP	A	D	Black	3/16"
4	NL4MP	A	D	Black	3/16"
4	NL4MP-2	B	E	Black	3/16"
4	NL4MP-UC	A	D	Black	1/4"
4	NL4MPR	Round C	D	Black	3/16"
8	NL8MPR	Square C	D	Nickel	3/16"
8	NL8MPR-BAG	Square C	D	Black Chrome	3/16"

Vertical PCB Termination

No of Poles	Part No	Flange Size & Layout	Hole Layout	Colour
2	NL2MD-V	A	D	Black
4	NL4MD-V	A	D	Black
4	NL4MD-V-1	A	E	Grey
4	NL4MD-V-2	B	E	Black
8	NL8MD-V	Square C	D	Nickel
8	NL8MD-V-1	Square C	E	Nickel
8	NL8MD-V-BAG	Square C	D	Black Chrome

Horizontal PCB Termination

No of Poles	Part No	Flange Size & Layout	Hole Layout	Colour
2	NL2MD-H	A	D	Black
4	NL4MD-H	A	E	Grey
4	NL4MD-H-1	A	D	Black
4	NL4MD-H-2	B	E	Black
4	NL4MD-H-3	B	E	Black

Speakon® STX Series Chassis Connector

The new Speakon® STX Series is the next generation of 4 & 8 pole Speakon® connectors especially designed for loudspeaker - amplifier applications in harsh and demanding environment such as professional touring. The STX Series features a metal housing which is extremely rugged and durable; built-in gaskets make it weatherproof. This new series offers beside the female cable connector and male receptacle now also a 4 pole male cable and female chassis connector.

Features

- Extremely robust metal housing designed for harsh and demanding environment
- Weatherproof design features sealing gaskets
- 4 type range - also male cable connector and female receptacle on 4-pole version
- All-metal housing makes the STX Series rugged and durable
- Weatherproof built-in gasket meets IP 54 protection class (4 pole)
- Ideal product for touring applications and harsh environments
- Best electrical performance up to 50 Amps
- Uses precise "quick lock" system
- Mates with all currently available Speakon® products

Speakon® STX Series Chassis Connector (cont.)

Solder Termination
Male

No of Pole	Nickel Housing	Black Chrome Metal Housing
4	NLT4MP	NLT4MP-BAG
8	NLT8MP	NLT8MP-BAG

Female

No of Pole	Nickel Housing	Black Chrome Metal Housing	PCB Contacts Rear Mount Metal Housing
4	NLT4FP	NLT4FP-BAG	NLT4MD-V

Connector Accessories

Speakon® Accessories

Right Angle Conversion Kit

Description	Part No
Kit to convert standard NL4FX to right angle configuration, blue ring	LRX

Coloured Rings

Colour	Part No
Red	LCR2
Yellow	LCR4
Green	LCR5
White	LCR9

AC Accessories

Coloured Boot / Backshell

Colour	Part No
Brown	AC-NUT-BRN
Red	AC-NUT-RED
Orange	AC-NUT-ORG
Yellow	AC-NUT-YEL
Green	AC-NUT-GRN
Blue	AC-NUT-BLU
Violet	AC-NUT-VIO
Grey	AC-NUT-GRY
White	AC-NUT-WHT

Metal Boot / Backshell

Finish	Part No
Black	AC-NUT-METAL

AC Accessories (cont.)

Coloured Identification Rings

Colour	Part No
Brown	AC-RING-BRN
Red	AC-RING-RED
Orange	AC-RING-ORG
Yellow	AC-RING-YEL
Green	AC-RING-GRN
Blue	AC-RING-BLU
Violet	AC-RING-VIO
Grey	AC-RING-GRY
White	AC-RING-WHT

Accessories

Coloured Boots - XX Series

Colour	Part No
Black	BXX-0
Brown	BXX-1
Red	BXX-2
Orange	BXX-3
Yellow	BXX-4
Green	BXX-5
Blue	BXX-6
Violet	BXX-7
Grey	BXX-8
White	BXX-9

Box of 100 pieces

Coloured Rings - XX Series

Colour	Part No
Black	XXR-0
Brown	XXR-1
Red	XXR-2
Orange	XXR-3
Yellow	XXR-4
Green	XXR-5
Blue	XXR-6
Violet	XXR-7
Grey	XXR-8
White	XXR-9

Box of 100 pieces

XLR Chassis Blank Panel

Type	Part No
Suits "D" series cutout	DBA

Lettering plate for "D" series

Colour	Part No
Black	DSS0
Brown	DSS1
Red	DSS2
Orange	DSS3
Yellow	DSS4
Green	DSS5
Blue	DSS6
Violet	DSS7
Grey	DSS8
White	DSS9

Rubber Dustcover "D" Series Receptacle

Type	Part No
Female	SCDF
Male	SCDM

Phono Type Connectors

1/4" (6.35mmØ) Phono Plugs

Amphenol

Amphenol has introduced two ranges of 1/4" phone plug connectors to satisfy the needs of the manufacturer and the end user. The PRO – a heavy duty on road plug and the MUSICIAN - a solid performing general use plug. Both series offer different features and benefits and the most suitable type will be determined by application, budget and personal choice.

Applications

- Audio cables and snakes
- Amplifiers
- Speakers
- Mixing desks
- Rack mount equipment
- Patch panel

Professional Series

Features

- Mono (TS) or Stereo (TRS)
- Stylised shell design with Ergonomic grip
- Robust diecast shell in Satin nickel or Black finish
- Nickel or Gold contact plating
- Keyed shell
- Optional heavy duty metal backshell / boot
- Great solderability
- Increased solder area on ground contact
- "Jaws" Cable Clamp
- Precision machined contacts
- Coloured Grommet

Options

- Gold contacts
- Large or small Jaws cable clamp
- Black shell
- Metal backshell/boot
- Bulk pack
- Coloured grommets (ordered separately)

1/4" (6.35mmØ) Phono Plugs (cont.)

Professional Series (cont.)

Amphenol

Mono

Finish	Thermoplastic Backshell	Metal Backshell	Black Metal Backshell
Satin	TM2P	TM2PN	TM2PM
Black	TM2PB	TM2PBM	-

Options
J denotes Large Cable Clamp - AU denotes Gold Plated Contacts - BULK denotes Bulk Pack of 100 pieces
Example: TM2P-AU

Stereo

Finish	Thermoplastic Backshell	Metal Backshell	Black Metal Backshell
Satin	TS3P	TS3PN	TS3PM
Black	TS3PB	TS3PBM	-

Options
J denotes Large Cable Clamp - AU denotes Gold Plated Contacts - BULK denotes Bulk Pack of 100 pieces
Example: TM3P-AU

Musician Series

Features

- Mono or Stereo (TRS)
- Stylish shell Design
- Robust diecast shell in Satin nickel or Black finish
- Nickel or Gold contact plating
- Flexible grommet cable protection
- Improved solderability
- Precision machined contacts
- Standard or Bulk packaging

Options

- Black shell
- Gold contacts
- Coloured grommets (ordered separately)

Mono

Finish	Standard	Right Angle
Satin	ACPM-GN	ACPM-RN
Black	ACPM-GB	ACPM-RB

Options
AU denotes Gold Plated Contacts Example: ACPM-GN-AU

Stereo

Finish	Standard	Right Angle
Satin	ACPS-GN	ACPS-RN
Black	ACPS-GB	ACPS-RB

Options
AU denotes Gold Plated Contacts - Example: ACPS-GN-AU

1/4" (6.35mmØ) Phono Plugs (cont.)

Profesional PC Series

Features

- Mono (TS) or Stereo (TRS)
- Meets EIA/IEC standards
- Unique plug finger design without rivets
- Sturdy diecast metal shell
- Excellent Neutrik® chuck type strain relief

Mono

Finish	Nickel Contacts	Gold Contacts
Nickel	NP2C	-
Black Chrome	NP2C-BAG	NP2C/B

Stereo

Finish	Nickel Contacts	Gold Contacts
Nickel	NP3C	-
Black Chrome	NP3C-BAG	NP3C/B

Roadworx Series

Mono

Finish	Standard
Nickel	RWCTS635FN

Stereo

Finish	Standard
Nickel	RWCTRS635N

1/4" Longframe Patch Plugs

Features

- 3 Pole
- 1/4" B-Guage and MIL Type plugs
- All metal design, chuck type strain relief, no rivets
- Meets all prevailing standards
- Available as plug fingers only for overmolding

Part No	Shell	Contacts	Plug Type
NP3TB-B	Black	Nickel	B-Gauge
NP3TB-R	Red	Nickel	B-Gauge
NP3TM-B	Black	Nickel	MIL
NP3TM-R	Red	Nickel	MIL

0.173" Bantam Type Miniature Plugs

Features

- Very robust ergonomic design
- Solder contacts
- Gold contact version in combination with the NJ3TTA jack eliminates contact problems due to corrosion or dirt
- The single plug NP3TT-P and the dual plug NP3TT-2 are made for assembling with a standard HEX crimping tool as used with coax cables

Single Plug

Part No	Shell	Contacts
NP3TT-P-B	Black plastic	Nickel
NP3TT-P-R	Red plastic	Nickel
NP3TT-P-AU-B	Black plastic	Gold
NP3TT-P-AU-R	Red plastic	Gold

Dual Plug

Part Number	Shell	Contacts
NP3TT-2	Black plastic	Nickel

3.5mm Miniature Plugs

Stereo

Type	Nickel
Male	RWCTRS35MN
Female	RWCTRS35FN

1/4" Locking Jacks

Professional Cable Jack

Features

- Securely locking cable jack
- Mates with all mono or stero plugs specified to EIA RS-453
- Extremely robust and reliable
- Execellent Neutrik® cable retention
- Coloured boots available in 10 colours
- For cable O.D. up to 8 mm

Part No	Shell	Contacts
NJ3FC6	Nickel	Silver
NJ3FC6-BAG	Black	Silver

Professional Chassis Jack

Features

- Mates with all mono or stereo plugs
- specified to EIA RS-453
- Dimensionally compatible with D series (31 x 26mm)
- Securely locking chassis jack
- Solder terminals
- Special version with black plastic shell

Part No	Shell	Contacts
NJ3FP6C	Nickel	Silver
NJ3FP6C-BAG	Black	Silver
NJ3FP6C-B	Black	Gold

RCA Connectors

In-Line RCA Plugs

RCA Series

Features

- Stylish design
- Flexible grommet cable protection
- Robust diecast shell
- Gold plated contacts
- Colour coded
- Good solderability
- Quick and easy assembly

Options

- Satin Nickel shell finish with coloured grommet
- Bulk Pack

Colour	Male	Female
Black	ACPR - BLK	ACJR - BLK
Blue	ACPR - BLU	ACJR - BLU
Green	ACPR - GRN	ACJR - GRN
Red	ACPR - RED	ACJR - RED
White	ACPR - WHT	ACJR - WHT
Yellow	ACPR - YEL	ACJR - YEL

In-Line RCA Plugs (cont.)

Roadworx Range

RCA connectors are used commonly also as a connector for composite video. These RCA's are generally a crimp type to suit coaxial cables, and Madison Technologies offers products from Whitesands Engineering and Kings Electronics for this application. These can be found in Section 3 - Video and RF Connectors and Adaptors.

Features

- Metal Shell
- Solder Terminals
- Gold Finish

Colour	Male	Female
Black	RWCRCAMG-B	RWCRCAFG-B
Red	RWCRCAMG-R	RWCRCAFG-R

Chassis Mount RCA Sockets

"D" Shell Type

Features

- 'D' Type Housing
- Stylish Design
- Robust Diecast Shell
- Gold Plated Contacts
- Colour Coded
- Good Solderability
- Quick and Easy Assembly

Part No	Colour
ACJD - BLK	Black
ACJD - BLU	Blue
ACJD - GRN	Green
ACJD - RED	Red
ACJD - WHT	White
ACJD - YEL	Yellow

Neutrik Series

Features

- "D" Size Shell
- Makes ground before signal contact and breaks signal before ground
- No more disturbing noise and broken speaker cones
- Precisely machined to our demanding quality standards
- Neutrik® unique chuck type strain relief
- Gold plated contacts

Options

- Nickel or Black Finish

Colour	Nickel Finish	Black Finish
Black	NF2D-0	NF2D-B-0
Red	NF2D-2	NF2D-B-2
Yellow	NF2D-4	NF2D-B-4
White	NF2D-9	NF2D-B-9

Roadworx Series Panel Mount

Features

- Metal shell
- Solder terminals
- Gold Finish

Part No	Colour
RWCRCAFCHASG-B	Black
RWCRCAFCHASG-BU	Blue
RWCRCAFCHASG-G	Green
RWCRCAFCHASG-R	Red
RWCRCAFCHASG-Y	Yellow
RWCRCAFCHASG-W	White

Banana Plugs

Banana Plugs

Features

- Solder Terminals
- Gold Plated Finish
- Black or Red Bands

Part No	Colour
RWCBPG-B	Black
RWCBPG-R	Red

Multipin Connectors

Circular and rectangular multi-pin connectors ideally suited to the entertainment industry. Featuring rugged housings and precision made contacts these connectors have proven themselves in the most demanding of applications. The extensive arrangement of different connector sizes and contact numbers ensure we can offer a solution to your multi-pin wiring applications.

Applications

- Audio Cables and Snakes
- Lighting control
- Concert Touring Systems
- Outside Broadcast Systems

Solder/Crimp Contacts

MP - 4I Series — Amphenol

Amphenol's MP-41 series of multipin connectors utilise the same design principals of the rugged Mil-C-5015 military connectors. They can withstand high shock and vibration environments and are ideal for tough on-road applications. Featuring a quick mating bayonet coupling with an audible full mating feature ensures a positive connection every time. Available from 13 to 150 pins with gold plated "combo"* contacts supplied with each connector as standard.

Features

- 13 to 150 pins (4 to 48 channel)
- Gold plated solder/crimp "combo" contacts
- Synthetic insert
- Protective dust caps
- Industry standard compatible
- 2000 mating cycles
- Black finish
- Positive bayonet locking
- PG cable glands
- IP67 rated

Options

- NPT threaded backshells

Solder/Crimp Contacts (cont.)

Inline Cable Connectors — Amphenol

Pins	Male	Female
13	MP-4106-13S	MP-4101-13P
19	MP-4106-19S	MP-4101-19P
25	MP-4106-25S	MP-4101-25P
37	MP-4106-37S	MP-4101-37P
54	MP-4106-54S	MP-4101-54P
85	MP-4106-85S	MP-4101-85P
150	MP-4106-150S	MP-4101-150P

Panel Mount Connectors

Pins	Male	Female
13	MP-4164-13S	MP-4102-13P
19	MP-4164-19S	MP-4102-19P
25	MP-4164-25S	MP-4102-25P
37	MP-4164-37S	MP-4102-37P
54	MP-4164-54S	MP-4102-54P
85	MP-4164-85S	MP-4102-85P
150	MP-4164-150S	MP-4102-150P

Protective Dust Caps to suit MP-41 Series

Pins	Male	Female
13	MP-25042-13	MP-25043-13
19	MP-25042-19	MP-25043-19
25	MP-25042-25	MP-25043-25
37	MP-25042-37	MP-25043-37
54	MP-25042-54	MP-25043-54
85	MP-25042-85	MP-25043-85
150	MP-25042-85	MP-25043-85

Solder Contacts

MP - 62 Series — Amphenol

Amphenol's Multipin MP-62 series of circular connectors utilises the same design principles as the Mil-C-26482 military connectors.

Featuring a three point quick mating bayonet coupling and five key polarisation ensuring a positive connection every time. Available in two contact pin layouts 39 and 61 with gold plated solder contacts fitted as standard.

Features

- 39 or 61 pins
- Gold plated solder contacts
- Black finish
- Neoprene inserts
- Protective dust caps
- Environmental resistant
- Positive Bayonet locking
- PG cable gland

Options

- NPT 3/4" threaded adaptors

Solder Contacts (cont.)

Cable Mount

Amphenol

Pins	Male	Female
39	MP-6216-39P	MP-6211-39S
61	MP-6216-61P	MP-6211-61S

Panel Mount

Pins	Male	Female
39	MP-6256-39P	MP-6212-39S
61	MP-6256-61P	MP-6212-61S

Protective Dust Caps to suit MP - 62 Series

Pins	Male	Female
39	MP-742-39	MP-738-39
61	MP-742-61	MP-738-61

Multipin Accessories

Contact Pilot Pin

Amphenol

No of Pins	Part No
13-85	MP-GUIDE-16
150	MP-GUIDE-18

Pin Contact

Amphenol

No of Pins	Part No	Description
13-85 (Size 16)	MP-108400	Combo Pin
150 (Size 18)	MP-108300	Crimp Pin

Socket Contact

Amphenol

No of Pins	Part No	Description
13-85 (Size 16)	MP-108600	Combo Pin
150 (Size 18)	MP-108500	Crimp Pin

Crimp Tool

Amphenol

No of Pins	Part No
All	M22520/1-01

Positioner/Turret

Amphenol

No of Pins	Part No
All	TH29-1

Insertion Tool

Amphenol

No of Pins	Part No
13-85	MP-INS-16
150	MP-INS-18

Extraction Tool

Amphenol

No of Pins	Part No
All	MP-EXT-16/18

D Type Connectors

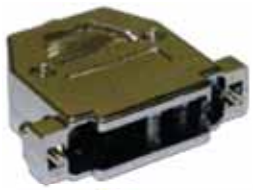
A range of "D" type solder plugs and sockets with gold plated pins, and accessories.

Type	Part No
9 Pin Male	RWCDE9SLP-G
9 Pin Female	RWCDE9SLS-G
15 Pin Male	RWCDE15SLP-G
15 Pin Female	RWCDE15SLS-G
25 Pin Male	RWCDE25SLP-G
25 Pin Female	RWCDE25SLS-G
37 Pin Male	RWCDE37SLP-G
37 Pin Female	RWCDE37SLS-G
HD15 Male	RWCHD15SLP-G
HD15 Female	RWCHD15SLS-G

Backshells

Metalised plastic backshells, supplied with short jackscrews

Type	Part No
9 Pin	RWCBSDE9-MP
15 Pin	RWCBSDE15-MP
25 Pin	RWCBSDE25-MP
37 Pin	RWCBSDE37-MP



Long Jackscrews

Supplied as 1 pair.

Part No	RWCDEJSLONG

DE9 Patch Panels

A 1RU, 19" mount blank powder coated patch panel to suit mounting of up to 16 DE9 male or female connectors. They can be supplied fully loaded, partially loaded or unloaded. Includes integrated loom bar.

Type	Part No
Loaded 16 x DE9 Female	RWPPDE9SS161U-LB
Loaded 16 x DE9 Male	RWPPDE9SP161U-LB
Unloaded 16 way panel	RWPPDE916U-LB

Audio Adaptors

XLR 3 pole to 3 pole

Gender Conversion Adapter

Amphenol

Pre wired with Metal Shell

Type	Nickel Finish	Black Finish
Male to Male	AC3M3MW	AC3M3MBW
Female to Female	AC3F3FW	AC3F3BW
Female to Male	AC3F3MW	AC3F3MBW

NEUTRIK

Female to Female	Male to Male	Male to Female
NA3FF	NA3MM	NA3MF

XLR 3 pole to 3 pole (cont.)

READWORX BY MADISON TECHNOLOGIES

Features

- Versatile, pre-wired and ready to use adaptors to reliably interlock various connector systems
- Professional look and compact space saving design, based on the X Series (XLR Worldwide accepted standard)
- Rugged diecast shell for best reliability

Type	Female to Female	Male to Male
Part No	RWADXLRFXLRFG	RWADXLRMXLRMG

Stereo Locking Jack (1/4 inch)

NEUTRIK

Type	Female	Male
Part No	NA3FJ	NA3MJ

Speakon to Mono (tip/sleeve) Jack (1/4 inch)

NEUTRIK

Adapter from NL4FC to 1/4 Inch 2-pole jack, wiring: +1 to TIP and -1 to SLEEVE

Type	Part No
NL4FC Speakon to mono jack (1/4 inch)	NA4LJ

Mono (tip/sleeve) Plug (1/4 inch) to XLR

NEUTRIK

Wired according to IEC 268-12: pin 2= signal, pin 1 and 3: connected to ground

Type	Female	Male
Part No	NA2FP	NA2MP

Stereo (tip/ring/sleeve) Plug (1/4 inch) to XLR

NEUTRIK

Type	Female	Male
Part No	NA3FP	NA3MP

BNC Socket to XLR

NEUTRIK

Wired according to IEC 268-12: pin 2 = signal, pin 1 and 3: connected to ground

Type	Female	Male
Part No	NA2FBNC	NA2MBNC

RCA to XLR

NEUTRIK

Wired according to IEC 268-12: pin 2 = signal, pin 1 and 3: connected to ground

Type	Part No
Female to Female	NA2FPMF
Male to Female	NA2MPMF
Female to Male	NA2FPMM
Male to Male	NA2MPMM

DMX Adaptors and Accessories

XLR 3 pole female - XLR 5 pole male for lighting (DMX) applications

NEUTRIK CONNECTING THE WORLD

Features

- Compact XLR 3 to 5 pole adaptors for lighting (DMX) applications
- Solve interconnection problems of the old (3-pole) and new (5-pole) DMX standard
- Enable usage of standard 3-pole microphone cable for DMX applications
- Based on the worldwide accepted standard XLR connectors
- Reliable and rugged diecast shell

Type	Female to Male XLR	Male to Female XLR
Part No	NA3F5M	NA3M5F

Our new range of DMX adaptors and terminators will save you time and money. Keep a dozen in your kit to ensure you are always well connected.

Amphenol

Features

- 3 to 5 contact adaptors pre-wired for convenience
- 120 ohm terminators
- RoHS Compliant

Description	Variation	Part No
XLR 3 Pole Female to 5 pole Male Adapter, Pre-wired, Metal Shell	Nickel Finish	AC3F5MW
	Black Finish	AC3F5MBW
XLR 3 Pole Male to 5 Pole Female Adapter, Pre-wired, Metal Shell	Nickel Finish	AC3M5FW
	Black Finish	AC3M5FBW
XLR 5 Pole Male to 5 Pole Male Adapter, Pre-wired, Metal Shell	Nickel Finish	AC5M5MW
	Black Finish	AC5M5MBW
DMX Terminator, 120ohm resistors, Metal Shell with Black finish	Nickel Finish	AC3MMB-DMXT
	Black Finish	AC5MB-DMXT

ITX Series Inline Transformers

More than an adapter, these "Get out of jailcards" provide a handy solution to the day to day problems experienced by the audio professional.

Male XLR-type output

Part No	Description
ITX	ITX is a compact custom-made audio isolation transformer providing a floating XLR-type output from an unbalanced source in a convenient package. Female XLR-type input. Male XLR-type output. Usable for 600Ω 1:1.
ITX-Q	ITX-Q is the same as ITX, but with a 1/4" (ø6.35mm) phone plug input. Male XLR-type output. Tip wired in-phase with pin-2. Usable for 600Ω 1:1.
ITX-BQ	ITX-BQ is the same as ITX, but with a 1/4" T/R/S phone plug input. Male XLR-type output. Tip wired in-phase with pin-2. Usable for 600Ω 1:1.

MAX Series Microphone Attenuators

Female XLR-type input. Male XLR-type output.
For low-Z (150Ω) microphones.

Part No	Type
MAX-10	10 dB attenuation (pad)
MAX-20	20 dB attenuation (pad)
MAX-30	30 dB attenuation (pad)

LMX Adapter/Attenuator

1/4" T/R/S jack input.
Male XLR-type output.

Part No	LMX

Ground Lifter

Female XLR-type input.
Male XLR-type output.

Part No	GLX

Inline Transformer

Female XLR-type input.
1/4" (ø6.35mm) phone plug output.

Part No	9144PC

Polarity Reverser

Female XLR-type input.
Male XLR-type output.

Part No	PRX

Wiretap

Male to female inline XLR connector ties pins 1, 2 and 3 on the XLR connector to a 4-terminal Phoenix combo-con connector.

Part No	WTX

RCA Adaptors

Jack to Jack type

READWORX BY MADISON TECHNOLOGIES

Type	Gold	Nickel
Dual	RWADRCAF2RCAF2G	-
Single	RWADRCAFRCAFG	RWADRCAFRCAFN

General Purpose RCA Adaptors

Part No	Description
RWADRCAFTS635M	RCA Socket to 6.35mm Plug, Nickel
RWADRCAMRCAF2N	RCA Plug to 2 x RCA Sockets, Nickel
RWADTRS35RCAF2G	3.5mm Stereo TRS Plug to 2 x RCA Jacks

Digital Audio Splitters

AES/EBU audio splitters come in single source and multi-channel panel products. Connectors in this group of products are XLR or BNC. Call for full data sheets on these products.

Type	Part No
RG59 BNC to (2) BNC, AES/EBU Splitter	PA820
(1) Female XLR to (2) Male XLR, Panel, AES/EBU Splitter	PA830
AES/EBU Splitter, Panel, 4 channels of PA 830, 1RU	PA835
(1) Male XLR to (2) Female XLR, AES/EBU Splitter	PA832

Baluns

Digital Audio Baluns and Balun Panels

These are best-of-breed products, used to transmit AES/EBU digital audio over coaxial cable, converting from and to the native XLR connector/wiring scheme. Individual baluns are available, as are rack-mountable panels incorporating up to 8 channels. Also available are electrically isolated models that terminate to screw terminals for special applications.

AES/EBU Digital Audio Balun

Type	Part No
75Ω F-BNC to M-XLR	PA810
75Ω F-BNC to F-XLR	PA811
75Ω F-BNC to M-XLR (10db PAD)	PA812
75Ω F-BNC to F-XLR (10db PAD)	PA813

PA810

AES/EBU Digital Audio Balun Panels

Type	Part No
(8) M-XLR to 75Ω F-BNC	PA818-M
(8) F-XLR to 75Ω F-BNC (10db PAD)	PA818-F
(4) of -M, (4) of -F	PA818-H
(8) F-XLR to 75Ω F-BNC (No PAD)	PA818-FN
(4) of -M, (4) of -FN	PA818-HN

Digital Audio Baluns and Balun Panels (cont.)

Time Code Audio Baluns

Type	Part No
75Ω F-BNC to M-XLR	PA900
75Ω F-BNC to F-XLR	PA901
50Ω M-BNC to M-XLR	PA902
50Ω F-BNC to M-XLR	PA903
RJ45 to M-XLR	PA904

SPDIF Digital Audio Baluns

Type	Part No
RCA to RJ45	PA881
75Ω F-BNC to RJ45	PA884
RCA to M-XLR (20db PAD)	PA882
RCA to F-XLR	PA883

UTP Digital Audio Balun

Type	Part No
M-XLR, 1' pigtail to RJ45	PA850
F-XLR, 1' pigtail to RJ45	PA851

Isolated AES/EBU Digital Audio Balun

Type	Part No
75Ω F-BNC to (3) Screw Terminals	PA840
75Ω F-BNC to (2) Screw Terminals	PA841

Analogue Audio Adaptors

These are single, dual (stereo) or quad channel devices, all of which permit extending the range of line-level (not amplified) audio signals from four meters to over 100 meters over UTP cable. (Below four meters, you can use standard audio cabling without significant distortion or loss, beyond that, you need our baluns). RCA or BNC or screw terminal to RJ45 terminations, with or without electrical isolation.

Analogue Audio Adaptors

Type	Part No
RCA to RJ45 (pins 4,5)	PA800
RCA to RJ45 (pins 1,2)	PA801
RCA to RJ45 (pins 3,6)	PA802
RCA to RJ45 (pins 7,8)	PA803
Stereo RCA to RJ45 (pins 1,2 & 3,6)	PA807
Dual Stereo: 4 RCA to RJ45	PA808
75Ω M-BNC to Screw Terminals	PA804
Screw terminals to RJ45, pins 5, 4	PA871
Screw terminals to RJ45, pins 1, 2 & 3,6	PA872
Screw terminals to RJ45 all pairs	PA874

InstaSnake PA200 Series

The ETS InstaSnake Series gives a compact, lightweight, versatile passive group of components allowing you to run audio signals over a single run of CAT5 or 5E or 6 cables.
The basic units are a pair of passive units with bi-directional capability which can be input directly into analog or digital consoles. Available in 2 basic send/receive units which can be mounted in a 2u 19" rack, plus units with pigtails, wall plate versions. The PA202P with (4) 18" pigtails lets you access the mixer without the need for an additional 4 microphone cables.

Description	Part No
(4) FXLR to RJ45 Jack, all pins, no phantom power	PA201F
(4) MXLR to RJ45 Jack, all pins, no phantom power	PA201M
(4) FXLR to RJ45 Jack, all pins	PA202F
(4) MXLR to RJ45 Jack, all pins	PA202M
(4) MXLR 1.50' Pigtail to RJ45 Jack, all pins	PA202P
(4)FXLR 1.50' pigtail to RJ45 jack, all pins	PA202FP
(3) FXLR + (1) MXLR to RJ45 Jack, all pins	PA203F
(3) MXLR + (1) FXLR to RJ45 Jack, all pins	PA203M
(3) MXLR + (1) FXLR 1.50 ft Pigtail to RJ45 Jack	PA203P
(3) FXLR to RJ45 jack, all pins	PA205F
(3) MXLR to RJ45 jack, all pins	PA205M
2 gang brushed steel wall plate, (4) FXLR	PA202FWP
2 gang brushed steel wall plate, MXLR to 110 punchdown	PA202MWP

Section 3

Video and RF Connectors and Adaptors

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BNC Panels - 47

Digital & Analogue Video Baluns - 47

Connector Cross Reference - 50

BNC and RCA Series

Kings Electronics – The 2065 series BNC connectors are True 75 ohm types. They are designed to terminate the most commonly utilised coaxial cables in the broadcast and Pro A/V industry, and meet the industry's stringent HDTV standards. The 3345 series RCA connectors are a 75 ohm design, suitable for analogue and digital cables.

These connectors all feature a full crimp design and are field installable with Kings or Paladin Crimp tools. The chart below cross references this series with the applicable Belden and Roadworx cables. See section 9 for more information on tooling required.

RG179/U, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
2065-26-9	True 75 ohm BNC	Belden 179DT

Miniature RG59/U, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
2065-11-9	True 75 ohm BNC	Belden 1855A
3345-3-9	75 ohm RCA	Belden 1865A
		Belden 7787A, 7789A
		Roadworx RW310123
		Roadworx RW320323
		Roadworx RW320523

RG59/U, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
2065-2-9	True 75 ohm BNC	Belden 1505A
3345-1-9	75 ohm RCA	Belden 1505F
		Belden 7796A, 7798A
		Roadworx RW310120
		Roadworx RW320520

RG59/U, Analogue only, Stranded

Part Number	Connector Type	These Connectors Suit
2065-2-9	True 75 ohm BNC	Belden 9259
3345-1-9	75 ohm RCA	Roadworx RW400122

RG59/U, Analogue only

Part Number	Connector Type	These Connectors Suit
2065-7-9	True 75 ohm BNC	Belden 8241
		Roadworx RW410123

RG59/U, Analogue and Digital, Double Braid (PSF ½)

Part Number	Connector Type	These Connectors Suit
2065-15-9	True 75 ohm BNC	Belden 8281

RG6/U, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
2065-10-9	True 75 ohm BNC	Belden 1694A
3345-2-9	75 ohm RCA	Belden 7710A, 7712A
		Roadworx RW310118

Mini Hi-Res, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
2065-29-9	True 75 ohm BNC	Belden 1277R Belden 1278R Belden 1279R Belden 1280R

BNC and RCA Series (cont.)

RG11/U, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
2065-8-9	True 75 ohm BNC	Belden 7731A

Note: For Crimp and strip tool cross-reference, please see table on page 48 in this section.

T1, T2 Types and True 75 Ohm

Amphenol offers a range of BNC connectors from both their Amphenol FR and Amphenol Connex facilities.
These are designed as T1 and T2 types and true 75 ohm types with the following specification.

T2 - constant 75 ohm performance with low VSWR from DC-1GHz
T1 - constant 75 ohm performance with low VSWR from DC-2GHz
True 75 ohm Types - Constant 75 ohm performance with low VSWR from DC-4GHz

For applications above 1GHz, T1 connectors or True 75 ohm types are recommended. These connectors all feature a full crimp design and are field installable with Paladin Crimp tools, details in section 9.

Miniature RG59/U, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
31-70241-1001	True 75 ohm BNC	Belden 1855A
112521	T2 BNC	Belden 1865A
		Belden 7787A, 7789A
		Roadworx RW310123
		Roadworx RW320323
		Roadworx RW320520

RG59/U, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
31-70237	True 75 ohm BNC	Belden 1505A
31-71008-1000	T2BNC	Belden 1505F
31-71008-1RX	T2BNC	Belden 7796A, 7798A
31-70008-1000	T1 BNC	Roadworx RW310120
		Roadworx RW320520

RG59/U, Analogue only

Part Number	Connector Type	These Connectors Suit
31-71008-3000	T1BNC	Belden 8241
112952	T1BNC	Roadworx RW410123
31-71008-RFX	T2 BNC	

RG59/U, Analogue only, Stranded

Part Number	Connector Type	These Connectors Suit
31-70008-1000	T1BNC	Belden 9259
31-71008-1000	T2 BNC	Belden 8241F
		Roadworx RW400122

RG59/U, Analogue, Double Braid (PSF 1/3)

Part Number	Connector Type	These Connectors Suit
31-23769	T2 BNC	Belden YR23769
		Roadworx RW420123

RG59/U, Analogue and Digital, Double Braid (PSF ½)

Amphenol

Part Number	Connector Type	These Connectors Suit
31-71032	T2BNC	Belden 8281
31-70235	T1 BNC	
112953	T1 BNC	

RG6/U, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
31-70248	True 75 ohm BNC	Belden 1694A
31-70000	T1 BNC	Belden 7710A, 7712A
112565	T2 BNC	Roadworx RW310118

RG11/U, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
31-70226	T1 BNC	Belden 7731A
112606	T2 BNC	

Mini RGB and RGBHV, Analogue

Part Number	Connector Type	These Connectors Suit
31-70013	T1 BNC	Belden 1407B
31-71013	T2 BNC	Belden 1417B
112955	T2 BNC	Belden 1406B
		Belden 1522A

RG58/U

Part Number	Connector Type	These Connectors Suit
112116	50 ohm BNC	Belden 8259

Note: For Crimp Die sizes, please see Cross Reference on page 49.

Whitesands Engineering offer a range of BNC, RCA, F type and other 1 piece connectors for easy field termination. These connectors are available in both crimp and compression styles. White Sands BNC connectors are SDI rated and meet SMPTE standards for HDTV. These high return loss connectors are compatible with the popular solid precision video cables. White Sands RCA connectors are intended to work with 75 Ohm cables. They are designed for use in home theatre and other installations. The chart below cross references this series with the applicable Belden and Roadworx cables.

Mini Hi-Res, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
SLC-BNC-MINI25	BNC Male, Compression Type	Belden 1277R
SLC-RCA-MINI25	RCA Male, Compression Type	Belden 1278R
SLC-F-MINI25	F Type Male, Compression	Belden 1279R
		Belden 1280R

Miniature RG59/U, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
BNCFP	BNC Male, Fixed Pin	Belden 1855A
BCNFPSLC	BNC Male, Compression Type	Belden 7787A, 7789A
RCAFP	RCA Male, Fixed Pin	Roadworx RW310123
RCAFPSLC	RCA Male, Compression Type	Roadworx RW320323
RCAFPFBH	RCA Female, Fixed Pin, Bulkhead	Roadworx RW32053

RG59/U, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
BNCFP59	BNC Male, Fixed Pin	Belden 1505A
BNCFPSLC59	BNC Male, Compression Type	Belden 7796A, 7798A
RCAFP59	RCA Male, Fixed Pin	Roadworx RW310120
RCAFPSLC59	RCA Male, Compression Type	Roadworx RW320520
SLC59	F Type Male, Compression	Roadworx RW320520

RG6/U, Analogue and Digital

Part Number	Connector Type	These Connectors Suit
BNCFP6	BNC Male, Fixed Pin	Belden 1694A
BNCFPSLC6	BNC Male, Compression Type	Belden 7710A, 7712A
RCAFPSLC6	RCA Male, Compression Type	Roadworx RW310118

RG6, Quad Screen

Part Number	Connector Type	These Connectors Suit
BNCFPSLC6Q	BNC Male, Compression Type	Belden 1189A
F56342G	F Type Male	Garland CC6QS
SLC6Q	F Type Male, Compression	
SLC6QO	F Type Male, Compression with "O" ring	

Note: For tooling details, please see cross reference on page 50.

A range of BNC and F type connectors to suit everyday coaxial cable types. The chart below cross references this series with the applicable Belden and Roadworx cables.

RG59/U, Analogue only

Part Number	Connector Type	These Connectors Suit
RWCBNCM59	T2 BNC	Belden 8241
RWCF59	F Type Male	Roadworx RW410123

RG6/U, Quad Screen

Part Number	Connector Type	These Connectors Suit
RWCBNC6Q	T2 BNC	Belden 1189A
RWCF6Q	F Type Male	Garland CC6QS

RG11/U, Quad Screen

Part Number	Connector Type	These Connectors Suit
RWCBNC11Q	T2 BNC	Belden 1617A
RWCF11Q	F Type Male	

RG58/U

Part Number	Connector Type	These Connectors Suit
RWCBNC58M	50 ohm BNC	Belden 8259
		Garland CC58

Note: For tooling details, please see table on page 50 in this section.

T1, T2 Types and True 75 Ohm (cont.)

Revolutionary "push-pull" locking design, ideal for high density applications, supplied complete with black boot. The chart below cross references this series with the applicable Belden and Roadworx cables.

Cable Type		Cable Part No	Connector Type	Neutrik Part No
RG59/U Miniature	Belden	1855A 7787A (Bundled Version) 7789A (Bundled Version)	Push-Pull BNC	NBNC75-PDE6
	Roadworx	RW310123 RW320323 (Bundled Version) RW320523 (Bundled Version)		
RG59/U	Belden	1505A 7794A (Bundled Version) 7796A (Bundled Version)	Push-Pull BNC	NBNC75-PLS9
	Roadworx	RW310120 RW320520 (Bundled Version)		
RG6/U	Belden	1694A 7710A (Bundled Version) 7712A (Bundled Version)	Push-Pull BNC	NBNC75-PTS11
	Roadworx	RW310118		

Triaxial Connectors

Triax push-pull connectors are used for TV cameras

The REDEL F Series is a range of self-latching triax connectors specifically designed for TV cameras. The Design of these connectors is particularly compact, they are easy to assemble and have an excellent electrical performance. They are fully intermatable with the 1051 A004 Series.

Recommended Cables

Cable Group	Reference
1	Belden 8232A
2	BEDEA Superflex traix 8
2	NEK 23860
2	FMC Triax 8
2	Hirakawa Triax 4.8/1.0
2	NOKIA Triax 8
2	NOKIA Triflex 8
3	Triax Type A2
3	Belden 9267
3	Fujikura 4.8/1.0 EFTXF
4	BEDEA SAuperflex triax 11
4	NEK 63990
4	FMC Triax 11
4	NOKIA Triax 11
4	NOKIA Triflex 11
5	Belden 8233A
6	NOKIA Triax 11/2
7	Triax Type B2
7	Belden 9192
7	Belden 9232
8	DEDEA Superflex triax 14
8	FMC Triax 14
8	Fujikura 9.6/2.22 EFTXF
8	NOKIA Triax 14

Triaxial Connectors (cont.)

Electrical Characteristics

Impedance	75 Ω
VSWR (0-500 MHz)1)	≤1.15
VSWR (0-1000 MHz)1)	≤ 1.20
Test voltage central contact/screen	2.9kVAC
Test voltage screen/external screen	1.9kVAC
Rated current	12A
Contact resistance	< 3m Ω
Contact resistance/internal screen	< 1.5m Ω
Electrical continuity of the screen	< 1.5m Ω
Insulation resistance	<1012 Ω
Watertightness (IEC 529)	IP 66

Straight plug with cable collet

Cable Group	Part No
1	FAZ.T75.FTCC85C
2	FAZ.T75.FTCC86C
3	FAZ.T75.FTCC90C
4	FAZ.T75.FTCC11C
5	FAZ.T75.FTCC12C
6	FAZ.T75.FTCC13C
7	FAZ.T75.FTCC14C
8	FAZ.T75.FTCC15C

Straight plug with cable collet and nut for fitting a strain relief

Cable Group	Part No
1	FAZ.T75.FTCC85Z
2	FAZ.T75.FTCC86Z
3	FAZ.T75.FTCC90Z
4	FAZ.T75.FTCC11Z
5	FAZ.T75.FTCC12Z
6	FAZ.T75.FTCC13Z
7	FAZ.T75.FTCC14Z
8	FAZ.T75.FTCC15Z

Straight plug with cable collet and safety nut

Cable Group	Part No
1	FBZ.T75.FTCC85C
2	FBZ.T75.FTCC86C
3	FBZ.T75.FTCC90C
4	FBZ.T75.FTCC11C
5	FBZ.T75.FTCC12C
6	FBZ.T75.FTCC13C
7	FBZ.T75.FTCC14C
8	FBZ.T75.FTCC15C

Fixed plug with cable collet, nut fixing

Cable Group	Part No
1	FCZ.T75.FTCC85C
2	FCZ.T75.FTCC86C
3	FCZ.T75.FTCC90C
4	FCZ.T75.FTCC11C
5	FCZ.T75.FTCC12C
6	FCZ.T75.FTCC13C
7	FCZ.T75.FTCC14C
8	FCZ.T75.FTCC15C

Fixed plug, nut fixing

Cable Group	Part No
1	FEZ.T75.FTCC39C
2	FEZ.T75.FTCC49C
3	FEZ.T75.FTCC49C
4	FEZ.T75.FTCC67C
5	FEZ.T75.FTCC67C FEZ.T75.FTCC84C
6	FEZ.T75.FTCC67C FEZ.T75.FTCC84C
7	FEZ.T75.FTCC14C FEZ.T75.FTCC84C
8	FEZ.T75.FTCC99C

Fixed socket, nut fixing, visible shell

Cable Group	Part No
1	FNZ.T75.FTCC39C
2	FNZ.T75.FTCC49C
3	FNZ.T75.FTCC49C
4	FNZ.T75.FTCC67C
5	FNZ.T75.FTCC67C FNZ.T75.FTCC84C
6	FNZ.T75.FTCC67C FNZ.T75.FTCC84C
7	FNZ.T75.FTCC14C FNZ.T75.FTCC84C
8	FNZ.T75.FTCC99C

Free socket with cable collet

Cable Group	Part No
1	FRZ.T75.FTMC85C
2	FRZ.T75.FTMC85C
3	FRZ.T75.FTMC90C
4	FRZ.T75.FTMC11C
5	FRZ.T75.FTMC12C
6	FRZ.T75.FTMC13C
7	FRZ.T75.FTMC14C
8	FRZ.T75.FTMC15C

Fixed socket with cable collet, nut fixing, visible shell

Cable Group	Part No
1	FSZ.T75.FTCC85C
2	FSZ.T75.FTCC86C
3	FSZ.T75.FTCC90C
4	FSZ.T75.FTCC11C
5	FSZ.T75.FTCC12C
6	FSZ.T75.FTCC13C
7	FSZ.T75.FTCC14C
8	FSZ.T75.FTCC15C

Free coupler	
Weight (g)	Part No
80	FVZ.T75.FTS

Straight coupler with two plugs	
Weight (g)	Part No
86	FFZ.T75.FTE

Adapter from REDEL socket to LEMO 3T.675 socket	
Weight (g)	Part No
76	FWZ.T75.FTS

Inner screen fixing

For all the models the letter <<C>> added to the end of the part number means a clamped inner screen.
For all the models with cable collet, (FAZ, FBZ, FCZ, FRZ AND FS) the letter <<E>> added to the end of the part number means a crimped inner screen.
For all the models without cable collet (FEZ and FNZ), the letter <<S>> added to the end of the part number means a soldered inner screen.

Video & RF Adaptors

Adaptors

Bulkhead Adapter - Isolated

Jack to Jack - Straight, Teflon Insulation

Amphenol

Type	Bayonet Lock to Bayonet	Push on Bayonet Lock
Part No	AC-BNC-JJA-75	AC-BNC-PJA-75

'D' Shell Housing Jack to Jack, Teflon Insulation

Finish	Bayonet Lock to Bayonet Lock	Push on to Bayonet Lock
Black	AC-BNC-JJ-75B	AC-BNC-PJ-75B
Nickel	AC-BNC-JJ-75	AC-BNC-PJ-75

Bulkhead Receptacle - Isolated

Amphenol

'D' Shell Housing
Jack to Solder Bucket with Ground Tag, Nylon Insulation

Finish	Black	Nickel
Part No	AC-BNC-JS-75B	AC-BNC-JS-75

U - Link

Amphenol

Type	Part Number
Centre to Centre - 20.6mm, Teflon Insulation, 75ohm	BNC-U-LINK 75*1

BNC Barrel Joiner

Amphenol

Connex T1 Type	Part Number
BNC Barrel joiner	112446

75 Ohm BNC Adaptors

KINGS

Part Number	Adapter Ends
2029-9-9	Bulkhead, Jack-Jack
2029-15-9	Jack-Jack
2029-16-9	Jack-Plug-Jack
2029-17-9	Bulkhead, Jack-Jack, iso. ground
2029-20-9	Jack-Plug, Right Angle

BNC Termination

KINGS

Part Number	Description
2555-3-32	75 ohm 0.1%, 1/2 watt

BNC Panel Mount

NEUTRIK

Precision 75Ω panel-mount BNC's including flushmount versions with D-Type housings. Machined stainless steel body and gold plated contacts. Superb VSWR and Return Loss performance. Choice of isolated or grounded versions in black or silver housings.

Flushmount BNC/BNC

Housing	Isolated	Grounded
Silver	NBB75-DFI	NBB75-DFG
Black	NBB75-DFIB	NBB75-DFG

Flushmount BNC/Solder Pins

Housing	Isolated	Grounded
Silver	NBB75-DSI	NBB75-DSG
Black	NBB75-DSIB	NBB75-DSGB

Bulkhead-mount BNC/BNC

Isolated	Grounded
NBB75-FI	NBB75-FG

Bulkhead-mount BNC/Solder Pins

Including set of isolation washers

Isolated
NBB75-SI

BNC and RF Adaptors

ROADWORX BY MADISON TECHNOLOGIES

Roadworx offers a range of within series and between series adaptors for common RF and Video connector types. These products are all Nickel finish

Part Number	Description
RWADBNCFBNCF2N	BNC T piece, BNC female to 2 x BNC female
RWADBNCFBNCFN	BNC female to BNC female barrel type joiner
RWADBNCFBNCFPMN	BNC jack to BNC jack, panel mount bulkhead
RWADBNCFRCAMN	BNC female to RCA male
RWADBNCMBNCF2N	BNC male to 2 x BNC female T piece
RWADBNCMBNCFN	BNC male to BNC female, L shaped
RWADBNCMFFN	BNC male to F socket
RWADBNCMRCAFN	BNC male to RCA female
RWADBNCTERM50	BNC 50 ohm termination
RWADBNCTERM75	BNC 75 ohm termination
RWADFFFFN	F socket to F socket
RWADFFPALFN	F socket to PAL socket
RWADFMFMN	F plug to F plug
RWADPALMFFN	PAL plug to F socket

Accessories

Strain Relief Boots

Kings Flexiboots

These strain-relief Flexiboots protect the cable from wear, fatigue and weather. The Flexiboots have a unique patented double-gripping action that assures a positive hold on Kings K-Grip Jr. connectors. Available in 10 colours.
Suits Belden and Roadworx Cables.

Part Number	Cable
1-8115-(colour)	Mini RG59/U
1-8577-(colour)	RG59/U
1-8144-(colour)	RG6/U

Roadworx

Roadworx offers a range of strain relief boots to suit the Belden and Roadworx RG59 and Mini RG59 size cables.

Colour	RG59/U	Mini RG59/U
Black	RWSRB59BK	RWSRB59MINBK
Blue	RWSRB59BU	RWSRB59MINBU
Brown	RWSRB59BN	RWSRB59MINBN
Green	RWSRB59GN	RWSRB59MINGN
Grey	RWSRB59GY	RWSRB59MINGY
Orange	RWSRB59OR	RWSRB59MINOR
Red	RWSRB59RD	RWSRB59MINRD
Violet	RWSRB59VI	RWSRB59MINVI
White	RWSRB59WH	RWSRB59MINWH
Yellow	RWSRB59YW	RWSRB59MINYW

White Sands Engineering

A range of strain relief boots to suit the Mini White Sands Engineering 1 piece crimp type BNC and RCA plugs with Mini RG59/U cables.

Colour	Mini RG59/U
Black	MBBK
Blue	MBBL
Brown	MBBN
Green	MBGN
Grey	MBGY
Red	MBRD
White	MBWH
Yellow	MBYW

Neutrik NBNC Series

Colour	Part Number
Black	BS-BNC-0
Brown	BS-BNC-1
Red	BS-BNC-2
Orange	BS-BNC-3
Yellow	BS-BNC-4
Green	BS-BNC-5
Blue	BS-BNC-6
Violet	BS-BNC-7
Grey	BS-BNC-8
White	BS-BNC-9

BNC Panels

Patch Panels

1RU 1x20

Supplied with 1 ID label, spaced to suit standard "U" links.

Loaded with	Material / Finish		
	Steel / Black	Aluminium / Clear	Aluminium / Black
Empty Panel	AC-BNC20M	AC-BNC20A	AC-BNC20B
AC-BNC-JJA-75	AC-BNC20MJ75	AC-BNC20AJ75	AC-BNC20BJ75
AC-BNC-PJA-75	AC-BNC20MP75	AC-BNC20AP75	AC-BNC20BPJ75

2RU 2x20

Supplied with 2 ID labels, spaced to suit standard "U" links.

Loaded with	Material / Finish		
	Steel / Black	Aluminium / Clear	Aluminium / Black
Empty Panel	AC-BNC40M	AC-BNC40A	AC-BNC40B
AC-BNC-JJA-75	AC-BNC40MJ75	AC-BNC40AJ75	AC-BNC40BJ75
AC-BNC-PJA-75	AC-BNC40MP75	AC-BNC40AP75	AC-BNC40BPJ75

Panel ID Label

Material	Part Number
Plastic	70-106

Digital & Analogue Video Baluns

Composite Video (Baseband Video)

This is the type of signal found as output on VCR, VHS and other consumer and professional grade video equipment - the difference is usually found in the connector type: RCA for the former and BNC for the latter. ETS has several single and multi-channel small-form-factor baluns which permit sending these signals over UTP cable.

Extended Baseband Video Baluns

Description	Part Number
Male BNC to RJ45 (pins 5,4)	PV848
Female BNC to RJ45 (pins 5,4)	PV849
Male BNC to RJ45 (pins 7,8)	PV843
RCA jack to RJ45 (pins 4, 5)	PV844
RCA jack to RJ45 (pins 5,4)	PV844B
Quad - 4 F-BNC to Screw Term	PV845S
Quad - 4 F-BNC to RJ45	PV845
Dual - 2 F-BNC to RJ45	PV846
Quad - 4 RCA to RJ45	PV847
Male BNC to Screw Terminals	PV848S
Female BNC to Screw Terminals	PV849S
'F' Conn to Screw Terminals	PV842S

Composite Video (Baseband Video) (cont.)

Isolated Baseband Video Balun

Description	Part Number
Female BNC to RJ45 (pins 5,4)	PV950
Female BNC to Screw Terminals	PV951

PV600 Series Video Balun Panels

Description	Part Number
FBNC to 50 pin Telco (label: 1..25)	PV609
FBNC to 50 pin Telco (label: 25..48)	PV604
FBNC to 50 pin Telco (label: 49..72)	PV605
FBNC to 50 pin Telco (label: 73..96)	PV606
FBNC to RJ45 (pins 5, 4)	PV607

S-Video

For transmission of the S-Video signal over cat 5e or better UTP cable.

Description	Part Number
S-Video (no audio) to RJ45	PV907

Digital Video

Sends SMPTE 259M video signals (bandwidth to 240 MHz) over CAT5E or better UTP cable.

Description	Part Number
Serial Digital Video Media Converters: F-BNC to RJ45 jack	PV850
F-BNC to screw terminals	PV852

Broadband Video

A common name for the type of transmission that is used by cable television (CATV) systems. The audio is part of the same signal as the video, and multiple channels are carried on the same wire, in different frequency ranges. ETS offers both Standard and Ultra Broadband Video Baluns - these differ in the distance and maximum number of channels that can be transmitted over UTP cabling. These baluns have been used in the most demanding video environment there is, live-broadcast television studios.

Broadband Video Balun

Description	Part Number
Female "F" to RJ45 (pins 4,5)	PV882
Male "F" to RJ45 (pins 4,5)	PV883

Ultra Broadband Video Balun

Description	Part Number
Female BNC to RJ45 (pins 4,5)	PV884
Female "F" to RJ45 (pins 4,5)	PV885
Male "F" to RJ45 (pins 4,5)	PV888

Description	Part Number
"F" Gender Adapter, Male to Male	PFA

Description	Part No
CATV Isolator	PV887

RGB and Component Video

Baseband video transmission methods where the colour values of a picture are separated into separate signals, transmitted and recombined at the display. Commercial and computer systems often use this type of system, which may be referred to as RGB, YUV, or YCrCb, among other standards. ETS has several products that address these needs, including the best-selling PV890 RGB Video Balun. This product group also encompasses a family of VGA Baluns, which use all four pairs of a UTP run to send the R, G, B and combined Sync signals.

RGB Video Balun

Description	Part Number
3 BNC to RJ45	PV890
3 BNC to RJ45 plug, 7' cord	PV894
RGB Coax/BNC Jumpers (3 set)	RGBJ3

RGBS Video Balun

Description	Part Number
4 BNC to RJ45	PV891

VGA Video Balun

Description	Part Number
VGA Video Balun Set	PV930
VGA Computer End Balun	PV931
VGA Monitor End Balun	PV932

VGA Dual Passive (DP) Balun

Description	Part Number
VGA Dual Passive (DP) Balun Set	PV934
VGA DP Computer Balun	PV935
VGA DP Monitor Balun	PV936

Active VGA

Description	Part Number
Active VGA Dual Output set	PV937-2
Passive Source VGA Balun	PV938
Active Dual Output VGA Balun	PV939-2
AC Transformer for PV937-2	21561

Component Video Balun (YCrCb)

Description	Part Number
3 BNC to RJ45	PV920
3 RCA to RJ45	PV921

AV Balun Products

Video with Stereo Audio baluns

The base PV902 balun converts and transmits full video and two audio channels over a single four-pair UTP (Unshielded Twisted Pair, aka cat 5e data cabling) run. Companion products include video only and a pair of multi-channel panel designs.

S-Video

Description	Part Number
S-Video plus Stereo Audio	AV902
S-Video (no audio)	AV907
S-Video plus Stereo Audio Panel	
3 Channels	AV914
6 Channels	AV915

Baseband Video/Stereo Audio Baluns

Baseband video is the analog signal you get from the "Video Out" connector on a VHS, Camera or other equipment. Usually it's an RCA-style connector, or a BNC on professional-grade devices. The single video plus stereo audio products (PV900 & PV901) are among our most popular products, sending signals over UTP. There are multi-channel panel devices available here, as well.

Baseband Video plus Stereo Audio

Description	Part Number
RJ45 to BNC and 2 RCA	AV900
RJ45 to 3 RCA	AV901
RJ45 to BNC and Screw Terminals	AV917

Dual Video, Dual Audio

Description	Part Number
RJ45 to 2 BNC and 2 RCA	AV905
RJ45 to 4 RCA	AV906

Baseband Video/Stereo Audio Distribution System

A dream product for the retail environment, this A/V distribution system is cascadable, permitting up to 512 outputs from a single source of audio and video. The source balun and distribution hubs feed the network which is terminated with PV901 or PV902 baluns at each monitor. Ideal for in-store advertising, wired with the same easy-to-use UTP cable that your data network runs on.

Broadband Video/Stereo Audio Distribution

Description	Part Number
Isolated A/V Source Balun	AV602
8 Channel Distribution Hub	AV608

VGA and Stereo Audio

Together at last! Based upon ETS's popular PV930 series of VGA baluns, the PV970 series uses two parallel runs of UTP to transmit the five distinct video signals (Red, Green, Blue, Horizontal and Vertical Sync.), along with right and left audio channels for a total of 7 pairs used. The baluns are fully passive, requiring no external power. The "Monitor End" baluns are available in two flavours, with audio connections via either a single stereo mini-jack or dual RCA connectors.

VGA plus Stereo Audio

Description	Part Number
VGA plus Stereo Audio set (PV971 and PV972)	AV970
VGA+Stereo Computer End	AV971
VGA+Stereo (mini) Monitor End	AV972
VGA+Stereo (RCA) Monitor End	AV973

AV Balun Products (cont.)

High Definition Component Video and Audio Baluns

For applications which require high definition componsent video and audio signals over distances of up to 500 feet over UTP. Note: AV822 requires 2 x cat5E cables or better for transmission.

Description	Part Number
HDCVB + Stereo Audio, (5) RCA jacks to (2) RJ45 jacks	AV822
HDCVB + Mono Audio (4) RCA jacks to RJ45 jack, all pins	AV823
HDCVB + Digital Audio (4) RCA jacks to RJ45 jack, all pins	AV824
HDCVB + Mono Audio (3) FBNCs + (1) RCA to RJ45	AV825
HDCVB + Digital Audio (3) FBNCs + (1) RCA to RJ45 jack	AV826
Set of 3 Coax RG59U jumper cables, 12" each	RGBJ3

AV827

Sends high def nition component video and audio signals on UTP at distances of up to 500 feet and provides an increased pixel resolution – up to 1080 pixels with a band-width of 270 MHz.

Description	Part No
HDCVB + Digital Audio + Stereo Audio + IR or Data Pass Through, (6) RCA jacks + screw terminals to (2) RJ45 20 KHz to 60 MHz (Digital Audio) jacks, all pins	AV827
HDCVB +Digital Audio + Stereo Audio + IR or Data Pass Through, (3) FBNC for Video + (3) RCA jacks, + screw terminals to (2) RJ45 jacks, all pins	AV828

AV820 Series

Sends high definition component video and audio signals on UTP at distances of up to 500 feet and provides an increased pixel resolution with a bandwidth of 270 MHz.

Description	Part No
HDCVB + Stereo Audio, (5) RCA jacks to (2) RJ45 jacks Video: pins 1,2,3,6,7 & 8 on RJ45 jack #1, Audio: pins 1,2, Audio: pins 1,2,3 & 6 on RJ45 jack #2	AV822
HDCVB + Mono Audio (4) RCA jacks to RJ45 jack, all pins	AV823
HDCVB + Digital Audio (4) RCA jacks to RJ45 jack, all pins	AV824
HDCVB + Mono Audio (3) FBNCs + (1) RCA to RJ45 jack	AV825
HDCVB + Digital Audio (3) FBNCs + (1) RCA to RJ45 jack	AV826
Set of 3 Coax RG59U jumper cables, 12" each	RGBJ3

Baluns – Low-cost Extension of Composite Video or S-Video & Audio

Description	Part No
Isolated Composite Video, S-Video, and Stereo Audio Balun. Extend a video and stereo audio signal on Cat5 cable to over 2,000 feet. No power supply needed. 2 units required for extension – one for each end.	UBL-CSA-U
Isolated Composite Video, Mono Audio, and Power Extension Balun. Extend a video and stereo audio signal on Cat5 cable to over 2,500 feet. 2 units required for extension – one for each end.	UBL-CPA-U

True 75 Ohm BNC and 75 Ohm RCA Crimp Plugs

KINGS

Cable Type		Cable Part No	Connector Type	Kings Part No	Crimp Die Sizes		Strip Tool Details		Kings		Paladin	
					Ferrule Crimp	Pin Crimp	Tool Part No	Replacement Cassette Part No	Tool Part No	Die PN	Tool Part No	Die Part No
RG179/U Miniature	Belden	179DT	True 75 Ω BNC	2065-26-9	0.128	0.042	KTS-8-1	1-8610-2	KTH-1000	KTH-2258	-	-
RG59/U Miniature Digital	Belden	1855A (incl. 7789A & other bundled)	True 75 Ω BNC	2065-11-9	0.178	0.042	1247	2247	KTH-1000	KTH-2025	1600	2662
	Roadworx	RW310123	75 Ω RCA	3345-3-9	0.178	0.042	1247	2247	KTH-5000	KTH-5003	1600	2662
RG59/U Miniature Digital	Belden	1865A	True 75 Ω BNC	2065-11-9	0.178	0.042	1247	2247	KTH-1000	KTH-2025	1600	2662
RG59/U Digital, Solid & Stranded Types	Belden	1505A (soild) 1505F (stranded) (incl. 7796A & other bundled Solid Core versions)	True 75 Ω BNC	2065-2-9	0.255	0.042	1247	2247	KTH-1000	KTH-2261	1600	2661
	Roadworx	RW310120	75 Ω RCA	3345-1-9	0.255	0.042	1247	2247	KTH-5000	KTH-5003	1600	2661
RG6/U Digital, Solid	Belden	1694A (incl. 7712 & other bundled)	True 75 Ω BNC	2065-10-9	0.278	0.042	1247	2247	KTH-1000	KTH-2255	1600	2663
	Roadworx	RW310118	75 Ω RCA	3345-2-9	0.278	0.042	1247	2247	KTH-5000	KTH-5003	1600	2663
RG11/U Digital, Solid	Belden	7731A	True 75 Ω BNC	2065-8-9	0.429	0.1			KTH-1000	KTH-2004	8014	Included
RG59 Analogue, Solid	Belden	8241	True 75 Ω BNC	2065-7-9	0.255	0.042	1247	2247	KTH-1000	KTH-2261	1600	2661
	Roadworx	RW4101123	True 75 Ω BNC	2065-7-9	0.255	0.042	1247	2247	KTH-1000	KTH-2261	1600	2661
RG59/U PSF1/2 Analogue, Solid, Double Braid	Roadworx	8281	True 75 Ω BNC	2065-15-9	0.324	0.042	1247	2247	KTH-1000	KTH-2119	1600	2660
RG59/U Analogue, Stranded	Belden	9259	True 75 Ω BNC	2065-2-9	0.255	0.042	1247	2247	KTH-1000	KTH-2261	1600	2661
	Roadworx	RW400122	True 75 Ω BNC	2065-2-9	0.255	0.042	1247	2247	KTH-1000	KTH-2261	1600	2661

True 75 Ohm BNC, T1 and T2 Crimp Plugs

Amphenol

Cable Type		Cable PN	75 Ω Connector Type	PN	Crimp Die Sizes		Strip Tool Details		Paladin	
					Ferrule Crimp	Pin Crimp	Tool PN	Replacement Cassette PN	Tool PN	Die PN
RG59/U Miniature Digital, Solid	Belden	1855A (incl. 7789A & other bundled)	T2	112521	0.178	0.068	-	-	1600	2003
	Roadworx	RW310123	True 75 Ω	31-70241-1001	0.178	0.042	1247	2247	1600	2662
RG59/U Miniature Digital, Stranded	Belden	1865A	T2	112521	0.178	0.068	-	-	1600	2003
			True 75 Ω	31-70241-1001	0.178	0.042	1247	2247	1600	2662
RG59/U Digital, Solid & Stranded Types	Belden	1505A (soild) 1505F (stranded) (incl. 7796A & other bundled Solid Core versions)	T2	31-71008-1000	0.255	0.068	1248	2248	1600	2005
			T2	31-71008-1RFX	0.255	0.068	1247	2247	1600	2005
			T1	31-70008-1000	0.255	0.052	1248	2248	8003	Included
	Roadworx	RW310120	True 75 Ω	31-70237	0.255	0.042	1247	2247	1600	2661
RG6/U Digital, Solid	Belden	1694A (incl. 7712 & other bundled)	T2	112565	0.324	0.052	1240	2240	1600	2663
			T1	31-70000	0.324	0.052	1248	2248	8003	Included
	Roadworx	RW310118	True 75 Ω	31-70237	0.225	0.042	1247	2247	1600	2661
RG11/U Digital, Solid	Belden	7731A	T2	112606	0.429	0.1	1248	2248	8014	Included
			T1	31-70226	0.429	0.1	1248	2248	8014	included
RG59/U PSF1/3 Analogue, Solid, Double Braid	Belden	YR23769	T2	31-23769	0.255	0.068	1247	2247	1500	2005
	Roadworx	RW420123								
RG59/U Analogue, Solid	Belden	8241	T2	31-71008-RFX	0.255	0.068	1247	2247	1600	2005
			T1	31-70008-3000	0.255	0.052	1248	2248	8003	Included
	Roadworx	RW400123	T1	112952	0.255	0.068	1240	2240	1600	2005
RG59/U Analogue, Stranded	Belden	8241F	T2	31-71008-1000	0.255	0.068	1248	2248	1600	2005
			T1	31-70008-1000	0.255	0.052	1248	2248	8003	Included
RG59/U PSF1/2 Analogue, Solid, Double Braid	Belden	8281	T2	31-71032	0.324	0.068	1248	2248	1600	2019
			T1	31-70235	0.324	0.042	1247	2247	1600	2660
			T1	112953			1240	2240	1600	2660
RG59/U Analogue, Stranded	Belden	9259								
	Roadworx	RW400122	T1	31-70008-1000	0.255	0.052	1248	2248	8003	Included
5 Way Mini RGBHV Analogue, Stranded	Belden	1522A	T2	31-71013	0.178	0.068	1258	N/A	1600	2006
			T1	31-70013	0.178	0.052	1258	N/A	8002 & 8003 (both needed)	Included
Mini RGB and RGBHV Analogue, Stranded	Belden	1417B	T2	31-71033	0.178	0.068	1258	2248	1600	2003
		1406B	T2	112955	0.178	0.068	1258	2248	1600	2003
		1407B								
RG58/U	Belden	8259	50 Ω Type	112116	0.213	0.068	1240	2240	1600	2005

True 75 Ohm BNC and 75 Ohm RCA Crimp Plugs

Cable Type		Cable Part No	Connector Type	White Sands Connector Type	White Sands Part No	Termination Tool Part No	Die Set Part No
RG59/U Miniature	Belden Roadworx	1855A 7787A (Bundled Version) 7789A (Bundled Version) RW310123 RW320323 (Bundled Version) RW320523 (Bundled Version)	BNC Male Fixed Pin	Crimp	BNCFP	ACT270	Included
			BNC Male	Compression	BNCFPSLC	CTFBR or PT5500	Included
			RCA Male Fixed Pin	Crimp	RCAFP	ACT270	Included
			RCA Male	Compression	RCAFPSLC	CTFBR or PT5500	Included
			RCA Female Fixed Pin Bulkhead	Crimp	RCAFPFBH	ACT270	Included
RG59/U	Belden Roadworx	1505A 7794A (Bundled Version) 7796A (Bundled Version) RW310120 RW320520 (Bundled Version)	BNC Male Fixed Pin	Crimp	BNCFP59	1600	2600 or 2019
			BNC Male	Compression	BNCFPSLC59	CTFBR or PT5500	Included
			RCA Male Fixed Pin	Crimp	RCAFP59	1600	2600 or 2019
			RCA Male	Compression	RCAFPSLC59	CTFBR or PT5500	Included
RG6/U	Belden Roadworx	1694A 7710A (Bundled Version) 7712A (Bundled Version) RW310118	BNC Male Fixed Pin	Crimp	BNCFP6	1600	2600 or 2019
			BNC Male	Compression	BNCFPSLC6	CTFBR or PT5500	Included
			RCA Male	Compression	RCAFPSLC6	CTFBR or PT5500	Included
RG6 Quad	Belden Garland	1189A CC6QS	BNC Male	Compression	BNCFPSLC6Q	CTFBR or PT5500	Included
			F Type Male	Crimp	F56342G	18BKCT611	Included
			F Type Male	Compression	SLC6QO	CTRBR or PT5500	Included

Cable Type		Cable PN	Connector Type	Roadworx Part No	Crimp Die Sizes		Paladin Strip Tool		Crimp Tool	
					Ferrule Crimp	Pin Crimp	Tool Part No	Replacement Cassette Part No	Tool	Die
RG59/U Solid	Belden Roadworx	8241 RW4101123	BNC T2	RWCBNCM59	0.255	0.068	1247	2247	1600	2005
			F Type	RWCF59					18BKCT611	Included
RG6/U Quad Screen	Belden Garland	1189A CC6QS	BNC T2	RWCBN6Q	0.319	0.068			RWHT1690	Included
			F Type	RWCF6Q					18BKCT611	Included
RG11/U Quad Screen	Belden	1617A	BNC T2	RWCBNC11Q	0.429	0.1			RWHT1680	Included
			F Type	RWCF11Q					18BKCT611	Included
RG58/U	Belden Garland	8259 CC58	BNC 50 Ohm	RWCBNC58M	0.213	0.068	1240	2240	1600	2005

Pre Made Cables, Stage Boxes and Snakes

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Audio and A/V Cable Assemblies

Madison Technologies offers a cable assembly service for local manufacture of any audio, video or A/V Cable. Using any components from this catalogue, or your alternate choice of cable and connectors. We can offer fast turn around on custom one off assemblies, or production line quantities.

Analogue and Digital Microphone and Professional Audio Patch Cables

Standard with Roadworx or Belden Flexible Series Cables, together with Amphenol metal body connectors, this popular range can be manufactured for either analogue or digital applications.

XLR - XLR, Analogue

Cable	Female to Female	Male to Male	Male to Female
Roadworx	RWXLRFXLRF**-R-A	RWXLRMXLRM**-R-A	RWXLRMXLRF**-R-A
Belden	RWXLRFXLRF**-B-A	RWXLRMXLRM**-B-A	RWXLRMXLRF**-B-A

Please specify the length of cable when ordering
** Denotes length in metres (Example: RWXLRFXLRF5.0-R-A)

XLR - XLR, Digital

Cable	Female to Female	Male to Male	Male to Female
Roadworx	RWXLRFXLRF**-R-D	RWXLRMXLRM**-R-D	RWXLRMXLRF**-R-D
Belden	RWXLRFXLRF**-B-D	RWXLRMXLRM**-B-D	RWXLRMXLRF**-B-D

Please specify the length of cable when ordering
** Denotes length in metres (Example: RWXLRFXLRF5.0-R-D)

Stereo Phono Plug, Analogue

Cable	XLR Male – ¼" TRS	XLR Female – ¼" TRS	¼" TRS – ¼" TRS
Roadworx	RWXLRMTRS**-R-A	RWXLRFTRS**-R-A	RWTRSTRS**-R-A
Belden	RWXLRMTRS**-B-A	RWXLRFTRS**-B-A	RWTRSTRS**-B-A

Please specify the length of cable when ordering
** Denotes length in metres (Example: RWXLRMTRS5.0-R-A)

Stereo Phono Plug, Digital

Cable	XLR Male – ¼" TRS	XLR Female – ¼" TRS	¼" TRS – ¼" TRS
Roadworx	RWXLRMTRS**-R-D	RWXLRFTRS**-R-D	RWTRSTRS**-R-D
Belden	RWXLRMTRS**-B-D	RWXLRFTRS**-B-D	RWTRSTRS**-B-D

Please specify the length of cable when ordering
** Denotes length in metres (Example: RWXLRMTRS5.0-R-D)

Analogue and Digital Microphone and Professional Audio Patch Cables (cont.)

Mono Phono Plug, Analogue

Cable	XLR Male – ¼" TS	XLR Female – ¼" TS	¼" TS – ¼" TS
Roadworx	RWXLRMTS**-R-A	RWXLRFTS**-R-A	RWTSTS**-R-A
Belden	RWXLRMTS**-B-A	RWXLRFTS**-B-A	RWTSTS**-B-A

Please specify the length of cable when ordering
** Denotes length in metres (Example: RWXLRMTS5.0-R-A)

Mono Phono Plug, Digital

Cable	XLR Male – ¼" TS	XLR Female – ¼" TS	¼" TS – ¼" TS
Roadworx	RWXLRMTS**-R-D	RWXLRFTS**-R-D	RWTSTS**-R-D
Belden	RWXLRMTS**-B-D	RWXLRFTS**-B-D	RWTSTS**-B-D

Please specify the length of cable when ordering
** Denotes length in metres (Example: RWXLRMTS5.0-R-D)

Long Frame Telephone, Analogue

Cable	XLR Male to Long Frame Telephone jack	XLR Female to Long Frame Telephone jack
Roadworx	RWXLRMLFTRS**-R-A	RWXLRFLFTRS**-R-A
Belden	RWXLRMLFTRS**-B-A	RWXLRFLFTRS**-B-A

Please specify the length of cable when ordering
** Denotes length in metres (Example: RWXLRMLFTRS5.0-R-A)

Long Frame Telephone, Digital

Cable	XLR Male to Long Frame Telephone jack	XLR Female to Long Frame Telephone jack
Roadworx	RWXLRMLFTRS**-R-D	RWXLRFLFTRS**-R-D
Belden	RWXLRMLFTRS**-B-D	RWXLRFLFTRS**-B-D

Please specify the length of cable when ordering
** Denotes length in metres (Example: RWXLRMLFTRS5.0-R-D)

Analogue and Digital Microphone and Professional Audio Patch Cables (cont.)

TT Bantam Telephone, Analogue

Cable	XLR Male to TT bantam Telephone jack	XLR Female to TT bantam Telephone jack
Roadworx	RWXLRMTTTRS**-R-A	RWXLRFTTTRS**-R-A
Belden	RWXLRMTTTRS**-B-A	RWXLRFTTTRS**-B-A

Please specify the length of cable when ordering
** Denotes length in metres (Example: RWXLRMTTTRS5.0-R-A)

TT Bantam Telephone, Digital

Cable	XLR Male to TT bantam Telephone jack	XLR Female to TT bantam Telephone jack
Roadworx	RWXLRMTTTRS**-R-D	RWXLRFTTTRS**-R-D
Belden	RWXLRMTTTRS**-B-D	RWXLRFTTTRS**-B-D

Please specify the length of cable when ordering
** Denotes length in metres (Example: RWXLRMTTTRS5.0-R-D)

General Purpose Audio and A/V Cables

Roadworx offers a range of pre assembled moulded style RCA cable assemblies for Audio and A/V applications.

Standard lengths are: 1m, 1.5m, 2m, 3m, 5m, and 10m

Part Number	Description
RWCARCARCA**N	Single RCA to Single RCA, Nickel
RWCARCARCA2**N	Single RCA to 2 x RCA, Nickel
RWCARCARCAF20.3N	Single RCA plug to 2 x RCA Socket, 0.3m, Nickel
RWCARCA2RCA2**N	2 x RCA Plugs to 2 x RCA Pugs, Nickel
RWCARCA2RCA2**G	2 x RCA Plugs to 2 x RCA Plugs, Gold
RWCARCA2TRS35**G	2 x RCA Plugs to 3.5mm Stereo TRS Plug, Gold
RWCARCA3RCA3**N	3 x RCA Plugs to 3 x RCA Plugs, Nickel
RWCARCA3RCA3**G	3 x RCA Plugs to 3 x RCA Plugs, Gold
RWCATRS35TRS35**N	3.5mm TRS Stereo Plug to 3.5mm TRS Stereo Plug, Nickel

Please specify the length of cable when ordering
** Denotes length in metres (Example: RWCARCARCA10)

Professional Audio Patch Cables

From Bittree USA, this range of Long Frame, Single TT Bantam and Dual TT Bantam patch cables. Suits Bittree, and other professional patching systems.

Audio Long Frame (1/4")

Colour	24in (61cm)	36in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	LPC2400- 110	LPC3600-110	LPC4800-110	LPC6000-110	LPC7200-110
Red	LPC2402-110	LPC3602-110	LPC4802-110	LPC6002-110	LPC7202-110
Yellow	LPC2404-110	LPC3604-110	LPC4804-110	LPC6004-110	LPC7204- 110
Green	LPC2405-110	LPC3605-110	LPC4805-110	LPC6005-110	LPC7205-110
Blue	LPC2406-110	LPC3606-110	LPC4806-110	LPC6006-110	LPC7206-110
Purple	LPC2407-110	LPC3607-110	LPC4807-110	LPC6007-110	LPC7207-110

Audio Bantam (TT)

Colour	24in (61cm)	36in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	BPC2400-110	BPC3600-110	BPC4800-110	BPC6000-110	BPC7200-110
Red	BPC2402-110	BPC3602-110	BPC4802-110	BPC6002-110	BPC7202-110
Yellow	BPC2404-110	BPC3604-110	BPC4804-110	BPC6004-110	BPC7204-110
Green	BPC2405-110	BPC3605-110	BPC4805-110	BPC6005-110	BPC7205-110
Blue	BPC2406-110	BPC3606-110	BPC4806-110	BPC6006-110	BPC7206-110
Purple	BPC2407-110	BPC3607-110	BPC4807-110	BPC6007-110	BPC7207-110

Dual Bantam (TT)

Colour	24in (61cm)	36in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	DPC2400	DPC3600	DPC4800	DPC6000	DPC7200
Red	DPC2402	DPC3602	DPC4802	DPC6002	DPC7202
Yellow	DPC2404	DPC3604	DPC4804	DPC6004	DPC7204
Green	DPC2405	DPC3605	DPC4805	DPC6005	DPC7205
Blue	DPC2406	DPC3606	DPC4806	DPC6006	DPC7206
Purple	DPC2407	DPC3607	DPC4807	DPC6007	DPC7207

Video Cable Assemblies and Wall Plates

A range of pre-assembled moulded type cable assemblies for analogue and digital domestic and commercial applications.

Analogue and Digital Composite Video Patch Cables

Standard with Belden 1505F Flexible RG59/U Digital Coax, together with Kings 75 Ohm connectors, these cables are suited to both analogue and digital video applications. Versions with solid core Belden or Roadworx cables available on request.

Part Number	Descirption
RWCABNCMBNCM**	BNC to BNC 75 Ohm Patch Cable, Analogue or Digital, Belden cable, Kings BNC plugs
RWCABNCMRCAM**	BNC to RCA 75 Ohm Patch Cable, Analogue or Digital, Belden cable, Kings BNC plugs
RWCARCAMRCAM**	RCA to RCA 750 Ohm Patch Cable, Analogue or Digital, Belden Cable, Kings RCA Plugs

**Denotes length in metres Example: RWBNCMBNCM2.0

VGA

HD15 to HD15

Length	Male to Female	Male to Male
2m	RWCAHD15MHD15F2.0G	RWCAHD15MHD15M2.0G
3m	RWCAHD15MHD15F3.0G	RWCAHD15MHD15M3.0G
5m	RWCAHD15MHD15F5.0G	RWCAHD15MHD15M5.0G
10m	RWCAHD15MHD15F10.0G	RWCAHD15MHD15M10.0G
15m	RWCAHD15MHD15F15.0G	RWCAHD15MHD15M15.0G
20m	RWCAHD15MHD15F20.0G	RWCAHD15MHD15M20.0G

HD15 Male to 3 RCA Plugs

Length	Gold
5m	RWCAHDI5MRCA35.0G

HD15 to 5 x BNC type

Type	Length	Part Number
HD15 Female to BNC Jacks	0.2m	RWCAHD15FBNCF0.2G
HD15 Female to BNC Jacks	0.3m	RWCAHD15FBNCF0.3G
HD15 Male to BNC Jacks	0.3m	RWCAHD15MBNCF0.3G
HD15 Male to BNC Jacks	0.9m	RWCAHD15MBNCF0.9G
HD15 Male to BNC Jacks	1.5m	RWCAHD15MBNCF1.5G
HD15 Male to BNC Jacks	3.0m	RWCAHD15MBNCF3.0G
HD15 Male to BNC plugs	0.3m	RWCAHD15MBNCM0.3G
HD15 Male to BNC plugs	0.9m	RWCAHD15MBNCM0.9G
HD15 Male to BNC plugs	1.8m	RWCAHD15MBNCM1.8G
HD15 Male to BNC plugs	3.0m	RWCAHD15MBNCM3.0G
HD15 Male to BNC plugs	5.0m	RWCAHD15MBNCM5.0G

HDMI and DVI Cables

HDMI Cables

Version 1.3 high deinition multimedia interface cables.

Type	Length	Part Number
HDMI Male to Male, 19 Pin	1m	RWCAHDMIM1.0
HDMI Male to Male, 19 Pin	1.5m	RWCAHDMIM1.5
HDMI Male to Male, 19 Pin	2m	RWCAHDMIM2.0
HDMI Male to Male, 19 Pin	3m	RWCAHDMIM3.0
HDMI Male to Male, 19 Pin	5m	RWCAHDMIM5.0
HDMI Male to Male, 19 Pin	10.0m	RWCAHDMIM10.0

Version 1.3 High Deinition Multimedia Interface Cables, with in-built booster.

Type	Length	Part Number
HDMI Male to Male, 19 Pin	15m	RWCAHDMIM15.0
HDMI Male to Male, 19 Pin	20m	RWCAHDMIM20.0
HDMI Male to Male, 19 Pin	25m	RWCAHDMIM25.0
HDMI Male to Male, 19 Pin	30m	RWCAHDMIM30.0

HDMI to DVI Cables

Type	Length	Part Number
HDMI Male, 19 Pin to DVI-D	2m	RWCAHDMIDVI2.0
HDMI Male, 19 Pin to DVI-D	3m	RWCAHDMIDVI3.0
HDMI Male, 19 Pin to DVI-D	5m	RWCAHDMIDVI5.0
HDMI Male, 19 Pin to DVI-D	10m	RWCAHDMIDVI10.0
HDMI Male, 19 Pin to DVI-D	15m	RWCAHDMIDVI15.0
HDMI Male, 19 Pin to DVI-D	20m	RWCAHDMIDVI20.0
HDMI Male, 19 Pin to DVI-D	25m	RWCAHDMIDVI25.0

DVI-D to DVI-D (Dual Link, 25 Pin + 1 Pin)

Type	Length	Part Number
DVI-D Dual Link, Male to Male	1m	RWCADVIDDVID1.0
DVI-D Dual Link, Male to Male	2m	RWCADVIDDVID2.0
DVI-D Dual Link, Male to Male	3m	RWCADVIDDVID3.0
DVI-D Dual Link, Male to Male	5m	RWCADVIDDVID5.0
DVI-D Dual Link, Male to Male	10m	RWCADVIDDVID10.0
DVI-D Dual Link, Male to Male	15m	RWCADVIDDVID15.0
DVI-D Dual Link, Male to Male	20m	RWCADVIDDVID25.0

DVI-I to VGA

Type	Length	Part Number
DVI-I Male to HD15 Male	2m	RWCAHD15MDVIIM2.0
DVI-I Male to HD15 Male	5m	RWCAHD15MDVIIM5.0
DVI-I Male to HD15 Male	10m	RWCAHD15MDVIIM10.0

VGA Wall Plates

Madison Technologies carries a range of plastic and metal VGA wall plates for use with projector systems. Both screw terminal types, and rear plug in connector types are offered.

Screw Terminal types house a HD15 female on the front, as well as a 3.5mm audio socket, with a screw terminal block on the rear.

Plug in connector types house a HD15 female and 3.5mm audio socket on the front, with the same on the rear for use with pre assembled cables. No cable termination on site is necessary. As well as the rear 3.5mm audio socket, a screw terminal is also fitted as an optional termination method for the audio.

VGA + Audio Wall Plates, Rear Screw Terminal Types

Part Number	Description
RWWPVGA35AWH	Front HD15F socket + 3.5mm audio socket, rear screw terminal connectors, metal, white
RWWPVGA35ABK	Front HD15F socket + 3.5mm audio socket, rear screw terminal connectors, metal, black
RWWPVGA35ACA	Front HD15F socket + 3.5mm audio socket, rear screw terminal connectors, metal, clear anodised
RWWPVGA35AWHP	Front HD15F socket + 3.5mm audio socket, rear screw terminal connectors, plastic, white

VGA + Audio Wall Plates, Rear Plug in Connector Types

Part Number	Description
RWWPPVGA35AWH	Front HD15F socket + 3.5mm audio socket, rear HD15F socket with 3.5mm socket / screw terminal connector, metal, white
RWWPPVGA35ABK	Front HD15F socket + 3.5mm audio socket, rear HD15F socket with 3.5mm socket / screw terminal connector, metal, black
RWWPPVGA35ACA	Front HD15F socket + 3.5mm audio socket, rear HD15F socket with 3.5mm socket / screw terminal connector, metal, clear anodised
RWWPPV-GA35AWHP	Front HD15F socket + 3.5mm audio socket, rear HD15F socket with 3.5mm socket / screw terminal connector, plastic, white

VGA Pre Made Cables with Integrated Audio

Convenient for use with the above plates, a range of pre assembled VGA cables, with integrated audio is also available. This allows for plug and play installation in the field.

Part Number	Description
RWCAHD15MM3.5MM1.5	1.5 metre HD15 Male – HD15 Male VGA lead with 3.5mm audio tails
RWCAHD15MM3.5MM3.0	3.0 metre HD15 Male – HD15 Male VGA lead with 3.5mm audio tails
RWCAHD15MM3.5MM5.0	5.0 metre HD15 Male – HD15 Male VGA lead with 3.5mm audio tails
RWCAHD15MM3.5MM10.0	10.0 metre HD15 Male – HD15 Male VGA lead with 3.5mm audio tails
RWCAHD15MM3.5MM15.0	15.0 metre HD15 Male – HD15 Male VGA lead with 3.5mm audio tails

S-Video Cables

Mini Din 4 Plug to BNC & RCA types

Type	Length	Part No
S-Video to 2 x BNC Jacks	0.2m	RWCAMD4BNCF20.2G
S-Video to 2 x BNC Plugs	0.2m	RWCAMD4BNCM20.2G
S-Video to 2 x BNC Plugs	1.8m	RWCAMD4BNCM1.8G
S-Video to 2 x RCA Jacks	0.2m	SVRCA

Mini Din 4 Plug to Mini Din 4 Plug

Finish	5m	10m
Gold	RWCAMD4MD45.0G	RWCAMD4MD410.0G

Component Video Cables

3 x RCA Plugs to 3 x RCA Plugs

Finish	2m
Gold	RWCARCA3RCA32.0G

Component Video and Composite Video WECO and Mini WECO Patch Cables

Bittree offers a wide variety of patch cords, adaptors, and looping plugs in WECO and Mini-WECO jack types.

Weco Looping Cords

Colour	Part No
Black	LP 75 00
Red	LP 75 02
Yellow	LP 75 04
Green	LP 75 05
Blue	LP 75 06
Gray	LP 75 08

Weco Patch Cords

Colour	24in (61cm)	36in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	VPC2400-75	VPC3600-75	VPC4800-75	VPC6000-75	VPC7200-75
Red	VPC2402-75	VPC3602-75	VPC4802-75	VPC6002-75	VPC7202-75
Yellow	VPC2404-75	VPC3604-75	VPC4804-75	VPC6004-75	VPC7204-75
Green	VPC2405-75	VPC3605-75	VPC4805-75	VPC6005-75	VPC7205-75
Blue	VPC2406-75	VPC3606-75	VPC4806-75	VPC6006-75	VPC7206-75
Purple	VPC2407-75	VPC3607-75	VPC4807-75	VPC6007-75	VPC7207-75

Component Video and Composite Video WECO and Mini WECO Patch Cables (cont.)

Weco Component Patch Cords

Bittree

Colour	24in (61cm)	36in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	CPC2400-75	CPC3600-75	CPC4800-75	CPC6000-75	CPC7200-75

Weco Mini-Weco

Mini-Weco Looping Plugs

Colour	Part Number
Blue	LPM 75 06

Mini-Weco Component Patch Cords

Colour	24in (61cm)	36 in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	CPCM2400-75	CPCM3600-75	CPCM4800-75	CPCM6000-75	CPCM7200-75

Mini-Weco Patch Cords

Colour	24in (61cm)	36 in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	VPCM2400-75	VPCM3600-75	VPCM4800-75	VPCM6000-75	VPCM7200-75
Red	VPCM2402-75	VPCM3602-75	VPCM4802-75	VPCM6002-75	VPCM7202-75
Yellow	VPCM2404-75	VPCM3604-75	VPCM4804-75	VPCM6004-75	VPCM7204-75
Green	VPCM2405-75	VPCM3605-75	VPCM4805-75	VPCM6005-75	VPCM7205-75
Blue	VPCM2406-75	VPCM3606-75	VPCM4806-75	VPCM6006-75	VPCM7206-75
Purpe	VPCM2407-75	VPCM3607-75	VPCM4807-75	VPCM6007-75	VPCM7207-75

Triaxial Cable Assemblies

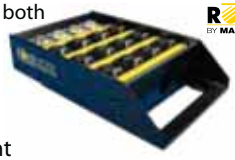
Pre-assembled Triax cables are available in all lengths and configurations. Made from either 8mm and 11mm flexible Belden Triax cable, with Lemo Redel "F" Series push – pull connectors, these assemblies are specifically designed for use with TV cameras. Please call to discuss your specific requirement.

Stage Boxes

Stage Boxes

A range of rugged stage boxes to suit both touring or fixed installation.

ROADWORX BY MADISON TECHNOLOGIES



Features

- 1.6mm steel box construction
- 16+4, 12+4, 8 straight, 6 straight versions available as standard sizes
- Standard with Roadworx flexibl multipair snake cable
- Quality Amphenol "D" flange connectors top loaded into box
- Durable plastic strain relief gland
- Silk-screened channel ID's with additional "write on" strips for each channel
- Individual channels at fan-out protected by additional tubing
- Channel ID's permanently printed onto connector assembly at fan-out end
- Quality Amphenol metal shell AC series solder type XLR connectors on fan outs
- Colour coded protective tubing and ID rings to designate returns at fan-out end
- Standard core lengths of 25m, 40m and 60m available, with custom core lengths manufactured to order

Version	25m	40m	60m
6	RWXLRF-6/25	RWXLRF-6/40	RWXLRF-6/60
8	RWXLRF-8/25	RWXLRF-8/40	RWXLRF-8/60
12+4	RWXLR12F/4M/25	RWXLR12F/4M/40	RWXLR12F/4M/60
16+4	RWXLR16F/4M/25	RWXLR16F/4M/40	RWXLR16F/4M/60

NOTE: Stage boxes can be offered with alternate cable such as Belden 15 or 19 series multicores and TRS connectors for returns. Please call for available options.

"Wally" Series Utility Breakout Boxes

Useful in an Outside Broadcast or major event situation to instantly breakout temporary cables, such as 10 and 20 pr telephone types to XLR or RJ45 connectors.

ROADWORX BY MADISON TECHNOLOGIES

Features

- 1.2mm steel box construction
- 10 pair IDC Module to 10 x XLR and 20 pair IDC Module to 20 x XLR Versions available
- Standard with 50 / 50 mix of male and female XLR's, or customised versions made to order
- Male and female XLR connectors can be easily paralled via jumpers on top side of disconnect module
- Quality Amphenol "D" flange XLR connectors top loaded into box
- Quality Neutrik "Ethercon" series RJ45 connectors utilised
- Silk screened line ID's with additional "write on" strips for each line
- Integrated carry handle and cable tie off points
- Parallel RJ45 Connectors

Type	Part No	Description
Wee Wally Box	RWXLR5F/5M/2D	10 Pair IDC
Big Wally Box	RWXLR10F/10M/5D	20 Pair IDC

StageMASTER

Perfect for weekender bands, church and school traveling contemporary music groups and for light to medium duty auditorium use, StageMASTER snakes are available in a variety of channel counts and lengths. Please call for channel counts and lengths not listed

Features

- Rugged design
- Available in 12, 16, 20, 28 and 32 channel configurations
- Available in lengths starting at 25' up to 250'
- 5 year warranty

Fan to box multipair audio cables (Snakes) with XLR returns

Second generation Duralink multipair audio cable and an all-new indestructible high-tech aluminum chassis with Neutrik XLR connectors.

# of Mics/# of Line Returns	Length			
	25Ft	50Ft	100Ft	150Ft
08/04	SMA0804FBX-25	SMA0804FBX-50	SMA0804FBX-100	SMA0804FBX-150
12/04	SMA1204FBX-25	SMA1204FBX-50	SMA1204FBX-100	SMA1204FBX-150
16/04	SMA1604FBX-25	SMA1604FBX-50	SMA1604FBX-100	SMA1604FBX-150
24/04	SMA2404FBX-25	SMA2404FBX-50	SMA2404FBX-100	SMA2404FBX-150

Fan to box multipair audio cables (Snakes) with 1/4" returns

Second generation Duralink multipair audio cable and an all-new indestructible high-tech aluminum chassis with XLR connectors and 1/4"

# of Mics/# of Line Returns	Length			
	25Ft	50 Ft	100Ft	150Ft
08/04	SMA0804FBQ-25	SMA0804FBQ-50	SMA0804FBQ-100	-
12/04	-	SMA1204FBQ-50	SMA1204FBQ-100	-
16/04	-	SMA1604FBQ-50	SMA1604FBQ-100	-
24/04	-	-	SMA2404FBQ-100	SMA2404FBQ-150

InstaSnake PA200 Series

A set of small boxes for sending up to four audio signals over a single run of UTP cable.

Description	Part No
(4) FXLR to RJ45 Jack, all pins	PA201F*
(4) MXLR to RJ45 Jack, all pins	PA201M*
(4) FXLR to RJ45 Jack, all pins	PA202F
(4) MXLR to RJ45 Jack, all pins	PA202M
(4) MXLR 1.50' Pigtail to RJ45 Jack, all pins	PA202P
(3) FXLR + (1) MXLR to RJ45 Jack, all pins	PA203F
(3) MXLR + (1) FXLR to RJ45 Jack, all pins	PA203M
(3) MXLR + (1) FXLR 1.50 ft Pigtail to RJ45 Jack	PA203P

* No Phantom Power

RoadMASTER

Perfect small PA company snakes, with rugged steel stage boxes and sturdy colour-coded fanouts, with configurations up to 40 channels. Options include hardwired feed through and disconnect splits (with optional transformer isolation and ground lift switches available).

Features

- Standard configurations are hardwired. Disconnect splits are optional
- 8, 12, 16, 20, 24, 28, 32 and 40 channel models are available
- 10 year warranty
- Neutrik XLR and ShowSavers 1/4" plug are used

Fan to box hardwired multipair audio snakes (XLR) returns

Second generation Duralink multipair audio wire with heavy-duty 12 and 16 gauge steel stage box to colour coded all XLR fan assembly.

# of Mics/ # of Line Returns	Length		
	50Ft	100Ft	150Ft
06/02	RM0602FBX-50	RM0602FBX-100	-
08/04	RM0804FBX-50	RM0804FBX-100	RM0804FBX-150
12/04	RM1204FBX-50	RM1204FBX-100	RM1204FBX-150
16/04	RM1604FBX-50	RM1604FBX-100	RM1604FBX-150
24/04	RM2404FBX-50	RM2404FBX-100	RM2404FBX-150
24/08	RM2408FBX-50	RM2408FBX-100	RM2408FBX-150
32/08	RM3208FBX-50	RM3208FBX-100	RM3208FBX-150

Fan to box hardwired multipair audio snakes with 1/4" returns

Second generation Duralink multipair audio wire with heavy-duty 12 and 16 gauge steel stage box to colour coded XLR and balanced 1/4" fan assembly.

# of Mics/ # of Line Returns	Length		
	50Ft	100Ft	150Ft
06/02	RM0602FBQ-50	RM0602FBQ-100	-
08/04	RM0804FBQ-50	RM0804FBQ-100	RM0804FBQ-150
12/04	RM1204FBQ-50	RM1204FBQ-100	RM1204FBQ-150
16/04	RM1604FBQ-50	RM1604FBQ-100	RM1604FBQ-150
24/04	RM2404FBQ-50	RM2404FBQ-100	RM2404FBQ-150
24/08	RM2408FBQ-50	RM2408FBQ-100	RM2408FBQ-150
32/08	RM3208FBQ-50	RM3208FBQ-100	RM3208FBQ-150

Fan to fan hardwired multipair audio snakes

Second generation Duralink multipair audio wire with heavy-duty colour coded fan to fan assembly any combination of 3 pin XLR male to XLR female.

# of Mics/ # of Line Returns	Length		
	25Ft	50Ft	100Ft
08/00	RM0800FF-25	RM0800FF-50	RM0800FF-100
12/00	RM1200FF-25	RM1200FF-50	RM1200FF-100

Multitrack Cable Assemblies

Analogue D-Sub (DB25) MultiTrack Recording Cables

Originally designed to connect TASCAM DA88 digital audio tape recorders to the various mixing consoles available, these work with Mackie, Tascam and Pro Tools I/O. This pinout will also work with Radar and Otari to name the major players.

Features:

- Pro Co ArmorFlex jacketed Acculink Multipair 8 channel wire, clearly numbered pairs for easy identification, 100% foil shielded
- Showsaver 1/4" T/R/S connectors or Neutrik XLR connectors
- Amphenol DB25 (D-Sub) connectors on all multitrack products
- 20 year warranty

NOTE: There are, unfortunately, two different thread standards for D-Subs – Metric and English. Both sets of screws are supplied.

DB25 Multipin Connector Wired to 8 Neutrik XLR 3-Pin Connector

Type	5Ft	10Ft	15Ft	20Ft
Female	DA88XF-05	DA88XF-10	DA88XF-15	DA88XF-20
Male	DA88XM-05	DA88XM-10	DA88XM-15	DA88XM-20

Wired to 8 ShowSavers TRS Phone Plug

5Ft	10Ft	15Ft	20Ft
DA88BQ-05	DA88BQ-10	DA88BQ-15	DA88BQ-20

Wired to DB25 Multipin Connector to DB25 Multipin Connector

5Ft	10Ft	15Ft	20Ft
DA88DM-05	DA88DM-10	DA88DM-15	DA88DM-20

Digital MultiTrack Recording Harnesses

8 channel multitrack recording cables designed specifically to connect the emerging number of hard disk recorders and digital mixing consoles now available.

Features

- 8 channel Acculink Digital ArmorFlex jacketed multipair wire, 110W digital standard to conform to AES/EBU
- Neutrik digital XLR's
- 5 year warranty

Digital I/O Multitrack Cable

8 Channel 110W Digital Acculink Wire
4 XLR Males (Channels 1-4) + 4 XLR Females (Channels 5-8) to
4 XLR Males (Channels 1-4) + 4 XLR Females (Channels 5-8)

10Ft	20Ft
MTD8XIO-10	MTD8XIO-20

8 channel Multipair Wire (Acculink Digital ArmorFlex jacketed)

1 Amphenol Digital XCRs 25-pin D-Sub
I/O harness for Mackie AES/ 4 XLR Males IN to 4 XLR Females OUT

10Ft	20Ft
DD8MXMXF-10	DD8MXMXF-20

Alesis ADAT MultiTrack Recording Cables

Designed to connect Alesis ADAT digital audio tape recorders to the various mixing consoles available.

Features

- Pro Co ArmorFlex jacketed Acculink™ multipair 16 channel wire, clearly numbered pairs for easy identification, 100% foil shielded
- Showsavers 1/4" T/R/S connectors or Neutrik XLR connectors Elco/ Edac 56 pin multipin connectors
- 20 year warranty

Adat to XLR Harness

1 Elco/Edac multipin connector wired to 8 Neutrik XLR 3-pin Male and Female Connectors

5Ft	10Ft	15Ft	20Ft
ADATX-05	ADATX-10	ADATX-15	ADATX-20

Adat to T/R/S Balanced Quarter Harness

1 Elco/Edac Multipin Connector wired to 16 ShowSavers 1/4" TRS Phone Plugs

5Ft	10Ft	15Ft	20Ft
ADATBQ-05	ADATBQ-10	ADATBQ-15	ADATBQ-20

Adat to D-sub Harness

1 Elco/Edac Multipin Connector wired to 2 DB25 Connectors, Labeled send and return

5Ft	10Ft	15Ft	20Ft
ADATM600-05	ADATM600-10	ADATM600-15	ADATM600-20

Analogue Studio Harness Cables

A variety of general use multitrack cables, in various channel counts and endless end configurations and lengths.

Features

- 8, 16 and 24 channel models available using Pro Co Acculink Armor Flex jacketed multipair wire, clearly numbered pairs for easy identification, 100% foil shielded
- Standard lengths are 10 and 20 feet, but any length is available
- Neutrik XLRs, ShowSavers 1/4" T/S and T/R/S phone plugs and Pro Co HD RCAs used
- 20 year warranty

HD RCA to HD RCAs

Channel (Acculink wire)	10Ft	20Ft
8	MT8RR-10	MT8RR-20
16	MT16RR-10	MT16RR-20

ShowSavers 1/4" TS Connectors to HD RCAs

Channel (Acculink wire)	10Ft	20Ft
8	MT8QR-10	MT8QR-20
16	MT16QR-10	MT16QR-10

ShowSavers 1/4" TS Connectors to ShowSavers 1/4" TS Connectors

Channel (Acculink wire)	10Ft	20Ft
8	MT8QQ-10	MT8QQ-20
16	MT16QQ-10	MT16QQ-20

Analogue Studio Harness Cables (cont.)

ShowSavers 1/4" TRS Connectors to ShowSavers 1/4" TRS Connectors

Channel (Acculink wire)	10Ft	20Ft
8	MT8BQBQ-10	MT8BQBQ-20
16	MT16BQBQ-10	MT16BQBQ-20
24	MT24BQBQ-10	MT24BQBQ-20

XLR 3-Pin Females to XLR 3-pin Males

Channel (Acculink wire)	10Ft	20Ft
8	MT8BQXM-10	MT8BQXM-20
16	MT16BQXM-10	MT16BQXM-20
24	MT24BQXM-10	MT24BQXM-20

ShowSavers 1/4" TRS Phone Plugs to XLR 3-pin Females

Channel (Acculink wire)	10Ft	20Ft
8	MT8BQXF-10	MT8BQXF-20
16	MT16BQXF-10	MT16BQXF-20
24	MT24BQXF-10	MT24BQXF-20

Insert Patch Snakes

ShowSavers 1/4" TRS Phone Plugs to 2 ShowSavers 1/4" TS Phone Plugs

These insert patch snakes provide either 4, 8 or 12 individual insert cables (send/return) per assembly.

Channel (Acculink Multipair Cable wire)	10Ft	20Ft
8	MTIP0408Q-10	MTIP0408Q-20
16	MTIP0816Q-10	MTIP0816Q-20
24	MTIP1224Q-10	MTIP1224Q-20

ConcertMASTER Professional Touring Snakes

Finally an alternative to the industry standard 56 channel snakes currently available, ConcertMASTER provides up to 64 channels, with 48 and 56 channel snakes also available in all necessary configurations, complete with disconnects, with optional transformer isolation and ground lifts, with sturdy ConcertMASTER multipin disconnects available in a wide variety of channel counts.

Features:

- Disconnects are standard, however hardwired systems are options
- Top of the craft systems for touring sound companies, Broadway shows, college and large church sound systems and other professional entertainers on the go
- Rack and floor boxes available as standard
- 5 year warranty
- Available in 48Ch, 58Ch and 64Ch configurations

ConcertMASTER Connectors	MASS Connectors
Dual output box (Rack or Floor)	Dual output Box (Rack or Floor)
8' Fanout (male multipin)	8' Fanout
25' Linetail (female multipin)	25'Linetail
50' Linetail (female multipin)	50' Linetail
50' Trunk (2 female multipins)	50' Trunk
100' Trunk (2 female multipins)	100'Trunk
50' Extension trunk (male to female multipin)	
100' Extension trunk (male to female multipin)	
25' Line Box	
25' Sub Box 16 ch	

Digital Snake System

Momentum digital snake system by Pro Co is designed to replace traditional analog audio wiring anywhere audio distribution is needed. By capturing audio at the source, converting it to digital audio and distributing it over a standard Ethernet network, many of the difficulties in executing the increasingly complicated audio systems of today can be simplified. By reducing the amount of field terminations, installation becomes less time consuming and produces a more robust signal path. The mic preamps and digital converters are professional grade components that provide a platform that is as close to analog as possible without the inherent problems that are associated with traditional wiring.

Flexibility and expandability is enhanced through the use of 8 channel modules for both inputs and outputs. Signal routing becomes as easy as clicking a button. You can put inputs and outputs anywhere you need them, without consequence. Also digital conversion is available for seamless system integration into many of the popular formats currently used. New for Momentum, a DSP mix engine can be added to an output unit for use as a personal monitor / distributed audio mixer capable of 4 stereo or 8 mono mixes using any 16 inputs that are available on the Momentum network.

Features

- Standard Gigabit Ethernet Protocol
- All components Power Over Ethernet (PoE) »»802.3af Compliant
- 8 channel expandability
- Up to 256 inputs per system
- 24 bit, 48/96 kHz resolution
- 0.5ms latency
- All components 1RU enclosures
- Enclosures can be used as rack mounted or stage boxes with included rubber boots
- 24 channel mix engine option
- Wireless control for mix engine
- Dedicated touch screen controller for system remote control
- Digital format converter unit with word clock sync
- Fibre optic option
- CobraNet option
- Integration control port (RS232) Phoenix and DB25 connectors are optional
- Optional AES3 Digital I/O

Options

-f

- Fibre optic Ethernet interface
- Can be added to any mi8 or mo8/me unit

-c

- Uses popular network platform for seamless system integration
- Can be added to any mi8 or mo8/me unit

+

- Contractor package rear panel
- Adds "Phoenix" connectors and a "DB 25" paralleled to the front panel connectors
- Adds an RS232 control port for 3rd party control systems access
- Can be added to any mi8 or mo8/me unit

Specifications

momentum™ PRO CO

Input Module: mi8

Resolution	24 bit, 48/96 kHz
Input Impedance	2k Ohms, balanced
Input Gain	
Mic Level	10-60dB, 1dB steps
Line Level	0dB
Pad	20dB
Maximum, no pad	10dBu
Dynamic Range	110dB, minimum
Crosstalk	<-100dB at 1 kHz
Frequency Response	20-20kHz, +/-0.05dB

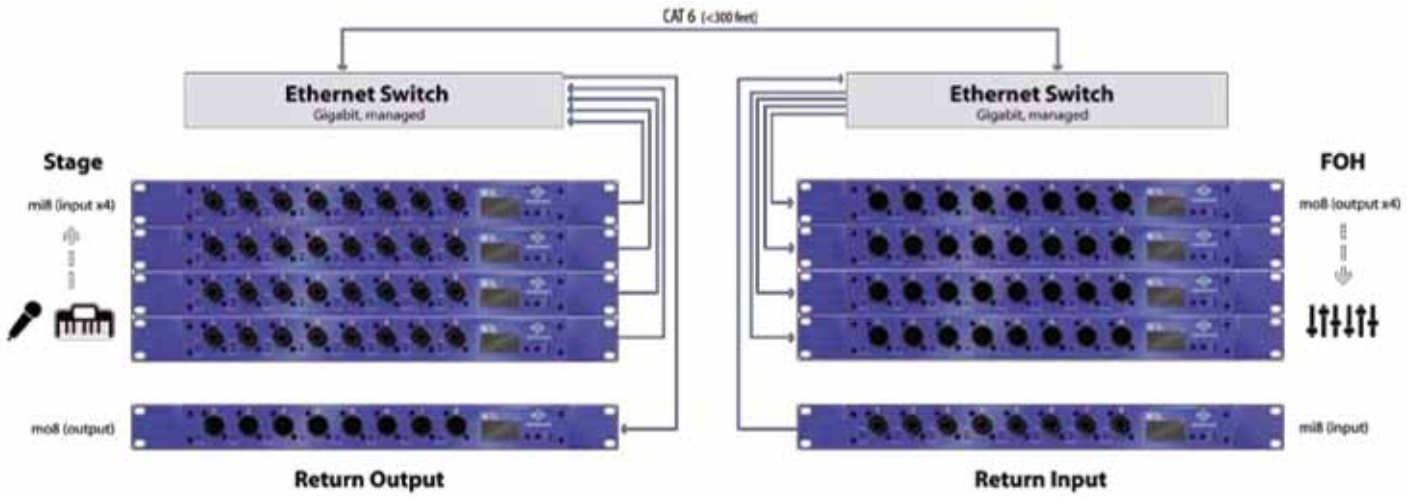
Output Module: mo8, mo8me

Resolution	24 bit, 48/96 kHz
Output Impedance	75 ohms, balanced
Output Level	10dBu
Dynamic Range	110dB, minimum
Crosstalk	<-100dB at 1 kHz
Frequency Response	20-20kHz, +/-0.05dB

Network Specifications

- Standard Gigabit Ethernet Protocol
- Power Over Ethernet (PoE) 802.3af Compliant
- Up to 256 total active system inputs
- Onboard memory and programming
- 0.5 ms A/A latency (no DSP)
- 1.25 ms A/A latency (with DSP)

Part No	Description
Input/Output Modules	
Mi8	8-ch input box
Mo8	8-ch output box
Mo8me	mo8 with mix engine, with 1 mrc
Md16ae	16-ch digital interface unit
System Controllers	
MRC	"The Tweak" Wireless remote control
Input/Output Connectivity Options	
Option –c	CobraNet Module
Option –f	Fibreoptic Ethernet
Option-+	Contractor Panel



Momentum Digital Snake System, As a Standard 32 x 8 Snake

Professional Audio Broadcast Products

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Direct Boxes

TradeTools are black-box products, built as a result of 22 years of "Can't you just?" requests by customers for standard products rather than custom ones to do a specific task. The boxes are built like a tank so they can be abused by life on the road. We do not need a bunny and a battery to keep these workhorses going. TradeTools will outlast the lifespan of the gear they are interfacing, yet are inexpensive to build and own. Get your system connected the right way, the first time with TradeTools.

Quad Direct Box

Features

- Floating Transformer-Balanced XLR Output for Maximum Isolation
- 4 Independent Channels for 4 Keyboards, Drum Machine Outputs, etc.
- 3 IN/OUT Jacks per Channel for Convenient Loop-Through
- LINE Mode Handles Signal Levels to +34 dBv
- GND/LIFT Switch Eliminates Hum and Buzz
- Rugged "Uni–box™" Construction for Super Strength and Shielding
- Passive Design Requires No Batteries or Phantom Power

Part Number	DB4A

Professional Direct Box

Features

- Floating Transformer-Balanced XLR Output for Maximum Isolation
- SPKR Mode Handles Amplifiers Up to 600W RMS
- HI CUT Filter Reduces Distortion
- GND/LIFT Switch Eliminates Hum and Buzz
- Rugged "Uni-box™" Construction for Super-Strength and Shielding
- Recessed Switches and Connectors Resist Damage
- Passive Design Requires No Batteries or Phantom Power

Part Number	DB1

Passive Direct Box

Features

- High Input Impedance Minimizes Loading for Maximum Sound
- Floating Transformer-Balanced XLR Output for Maximum Isolation
- GND/LIFT Switch Eliminates Hum and Buzz
- Handles Line-Level Inputs to +20 dBv at 20 Hz
- Rugged "Uni-box™" Construction for Super-Strength and Shielding
- Recessed Switches and Connectors Resist Damage
- Passive Design Requires No Batteries or Phantom Power

Part Number	CB1

Interface Units

Audio / Video Interface

Features

- Better Sound from Projectors, Computers and DVDs
- Ideal for Meetings, Lectures and Presentations
- Output Transformer for Ground Isolation
- Offers Choice of Standard Connectors – No Adaptors Needed
- Handles Signal Levels from -20 to +40 dBv
- 16Ω Dummy Load Prevents Amplifier Damage
- Rugged "Uni-box™" Construction Provides Protection and Shielding

Part Number	AV1A

iFace

Features

- Properly interfaces consumer-grade portable audio players and laptop computers to professional sound systems
- Stereo mini (1/8") input jack and individual RCA left and right input jacks provided
- Transformer-isolated XLR male output jacks provided
- Stereo/mono switch sums inputs to create a true stereo output or a mono audio out feed from either XLR connector
- Rugged "Uni-Box" construction provide protection and EMI/RMI shielding

Part Number	iface

Wallplate Audio/Video Interface with Input Level Control

Features

- Better Sound from Projectors, Phonographs and Recorders
- Ideal for Churches, Meeting Rooms, and Schools
- Output Transformer for Ground Isolation
- Projector Input has 16Ω Dummy Load
- Input Level Control
- Stereo Line Inputs are Mixed to Mono Output
- Independent XLR Microphone Input
- Barrier Strip Output Connections

Part Number	AVP1VSTS

Signal Isolators

4-Channel Isolation Transformer Unit

Features

- Isolates Unbalanced Line-Level Outputs
- True Floating Transformer Isolation
- 4 Channels in Single Rack Space
- XLR and 1/4" (6.3mm) Phone Jack Connectors
- Ideal for Portable and Permanent Sound Systems
- Rugged "Uni–box™" Construction for Super Strength and Shielding
- All Connectors Accessible From Front

Part Number	IT4A

8-Channel Isolation Transformer Unit

Features

- Isolates Unbalanced Line-Level Outputs
- True Floating Transformer Isolation
- 8 Channels in Single Rack Space
- Professional XLR Connectors
- Ideal for Portable and Permanent Sound Systems
- Rugged "Uni–box™" Construction for Super Strength and Shielding

Part Number	IT8A

Isolation Transformer Unit

Features

- True Floating Transformer Isolation for Unbalanced Line-Level Outputs
- Input, Output and Loop-Thru XLR and 1/4" (6.3mm) Phone Jack Connectors
- Can Be Used As Line-Level Direct Box
- Ideal for Portable and Permanent Sound Systems
- Rugged "Uni-box™" Construction Shields and Protects

Part Number	IT1

Instore Display Switchers

Use these Pro Co instore display switchers as solutions to the never-ending problem of keeping pro audio rooms organized and operational, ready to demo "now".

Demo Effects Switcher

Allows for up to twelve (12) stereo effects units to be demo'd at once. Units can be easily daisy-chained to increase channel count where needed. Unit's outputs are parallel wired allowing abiilty to listen through an instore monitoring system, signal can be sent to a recorder for later playback or sent to headphones via the DFX12's built-in headphone amp. DFX12 - dual rack space unit can be mounted in any standard 19" rack. The switching is accomplished using twenty-four (24) DPDT (double-pole double-throw) heavy-duty miniature toggle switches, located on the front panel of the unit, allowing any individual output or combination of the outputs to be fed to the stereo unit. All inputs and outputs are balanced 1/4" T/R/S jacks. A power supply is provided.

Part Number	DFX12

Demo Mic Preamp Selector

Allows for up to twelve (12) mic preamps and two (2) microphones to be demo'd at once. The unit's outputs have been parallel wired so the customer can listen through an instore monitoring system, or the signal can be sent to recorder for later playback or sent to headphones via the DMPS12H's built-in headphone amp. The DMPS12H is a single rack space unit that can be mounted in any standard 19" rack. The switching is accomplished using twelve (12) DPDT (double-pole, double-throw) heavy-duty miniature toggle switches, located on the front panel of the unit, allowing any individual output or combination of the outputs to be fed to the mic preamp. Inputs are three (3) pin female XLRs, and patch points and outputs use balanced 1/4" T/R/S jacks. A power supply is provided.

Part Number	DMPS12H

Demo Monitor Selector

Allows for up to eight (8) stereo pairs of powered or unpowered near-field monitors or PA speakers to be demoed at once. Units can be easily daisy-chained to increase channel count where needed. The DMS8 is a single rack space unit that can be mounted in any standard 19" rack. The switching is accomplished using eight (8) 4PDT (four-pole, double-throw) heavy-duty miniature toggle switches, located on the front panel of the unit, allowing any individual output or combination of the outputs to be fed to the stereo pair. All inputs and outputs are balanced 1/4" T/R/S jacks. These switchers are all built like a tank and are warranted against failure for five years from date of purchase. The units add a professional touch to all pro audio room displays, whether for recording or PA use.

Part Number	DMS8

Microphone Splitters

1, 4, and 8 channel micrphone splitters utilise superior components to split each channel into two or three distortion-free feeds. Housed in rugged enclosures, The Pro Co Mic Splitters are built for dependability on the road and in permanent installations.

4 channels 1-in, 1-isolated, 1-direct outputs

Features

- Provides 2-Way Split for Low-Z Microphones
- 4 Splitter Channels in Single Rack Space
- Allows Assembly of Economical Expandable Splitting System
- Great for Musicians' Monitoring and Remote Recording
- Connects with Standard Mic Cables
- High-Quality Transformer-Isolated Outputs
- Rugged "Uni–box™" Construction for Super Strength and Shielding
- All Connectors Accessible from the Front

Part Number	MS42A

4 channels 1-in, 2-isolated, 1-direct outputs

Features

- Provides 3-Way Split for Low-Z Microphones
- 4 Splitter Channels in Single Rack Space
- Allows Assembly of Economical Expandable Splitting System
- Great for Musicians' Monitoring, Remote Recording and Broadcast
- Connects with Standard Mic Cables
- High-Quality Transformer-Isolated Outputs
- Rugged "Uni-Box™" for Super Strength and Shielding

Part Number	MS43A

8 channels 1-in, 1-isolated, 1-direct outputs, I/O via Phoenix Combo-Con™

Features

- Provides 2-Way Split for Low-Z Microphones
- 8 Splitter Channels in Single Rack Space
- Allows Assembly of Economical Expandable Splitting System
- Great for Musicians' Monitoring, Remote Recording and Broadcast
- Connects with Phoenix COMBICON™ Plug-in Screw Connectors
- High-Quality Transformer Isolated Outputs
- Rugged "Uni-Box™" Construction for Super Strength and Shielding

Part Number	MS82

8 channels 1-in, 1-isolated, 1-direct outputs, I/O via Phoenix Combo-Con™

Features

- Provides 2-Way Split for Low-Z Microphones
- 8 Splitter Channels in Single Rack Space
- Phantom Power Buss for Powering Condenser Mics from an External Power Source
- Allows Assembly of Economical Expandable Splitting System
- Great for Musicians' Monitoring, Remote Recording and Broadcast
- Connects with Phoenix COMBICON™ Plug-in Screw Connectors
- High-Quality Transformer- Isolated Outputs
- Rugged "Uni-Box™" Construction for Super Strength and Shielding

Part Number	MS82P

8 channels 1-in, 2-isolated, 1-direct outputs, I/O via Phoenix Combo-Con™ -

Features

- Provides 3-Way Split for Low-Z Microphones
- 8 Splitter Channels in Single Rack Space
- Allows Assembly of Economical Expandable Splitting System
- Great for Musicians' Monitoring, Remote Recording and Broadcast
- Connects with Phoenix COMBICON™ Plug-in Screw Connectors
- High-Quality Transformer - Isolated Outputs
- Rugged "Uni–box™" Construction for Super Strength and Shielding

Part Number	MS83

8 channels 1-in, 2-isolated, 1-direct outputs, I/O via Phoenix Combo-Con™

Features

- Provides 3-Way Split for Low-Z Microphones
- 8 Splitter Channels in Single Rack Space
- Phantom Power Buss for Powering Condenser Mics from an External Power Source
- Allows Assembly of Economical Expandable Splitting System
- Great for Musicians'Monitoring, Remote Recording and Broadcast
- Connects with Phoenix COMBICON™ Plug-in Screw Connectors
- High-Quality Transformer - Isolated Outputs
- Rugged "Uni–box™" Construction for Super Strength and Shielding

Part Number	MS83P

1-INTO-2 Microphone Splitter

Features

- Provides 2-Way Split for Low-Z Microphone
- Great for Musicians' Monitoring and Recording
- ENG Uses Include Press Conferences and Speeches
- Connects with Standard Mic Cables
- High-Quality Transformer-Isolated Output
- Rugged "Uni-box™" Construction for Protection and Shielding

Part Number	MS-2

1-INTO-3 Microphone Splitter

Features

- Provides 2-Way Split for Low-Z Microphone
- Great for Musicians' Monitoring and Recording
- ENG Uses Include Press Conferences and Speeches
- Connects with Standard Mic Cables
- High-Quality Transformer-Isolated Output
- Rugged "Uni-box™" Construction for Protection and Shielding

Part Number	MS-3

Line Level Splitter

8 channels 1-isolated, 1-direct output1- isolated out, 1-direct out, I/O via Phoenix Combo-Con™

Features

- Provides 2-Way Split for Line Level Outputs
- 8 Channels in a Single Rack Space• Isolates Unbalanced Line-Level Outputs
- Ideal for Portable and Permanent Sound Systems
- Allows Assembly of Economical Expandable Splitting System
- Connects with Phoenix COMBICON™ Plug-in Screw Connectors
- True Floating Transformer Isolation
- Rugged "Uni-Box™" Construction for Super Strength and Shielding

Part Number	LS82

Monitor Speaker Selectors

Switch Witch Powered Monitor Selector

A simple, effective line level speaker switcher that allows the user to select up to four pairs of speakers from a single balanced stereo line level source. All ins and outs are balanced.

Part Number	Switch Witch

Microphone Combiner

Microphone Combiner

Features

- For combining the signals from 2 low-Z balanced microphones to 1 mixer input
- 2 female XLR-type inputs (one with polarity reverse switch)
- Male XLR-type isolated output
- Uses Pro Co MBT-2 transformer (150Ω 1:1:1)

Part Number	MC2

Cough Drops

Momentary Muting Switch - Short Stop

Features

- Momentary foot switch that allows operator to temporarily mute microphone
- Sellection switch for dynamic or condenser microphone

Part Number	CDSS

Sign Off Latching Muting Switch

Features

- Latching foot swtich that allows the operator to turn a micrphone on or off at the press of a button
- Selection switch for dynamic or condenser microphone

Part Number	CDSO

Power Mute Selectable Muting Switch

Features

- Selectable either as a momentary (press to mute or press to talk) or latching (mic on / mic off) muting switch
- Status indicator light
- Includes AC power supply

Part Number	CDPM

Panic Button

Features

- Allows entertainers to switch the microphone signal path from front of house to backstage or alternative location.
- A/B switch also allows unit to be used as a muting switch
- Status indicator light
- Includes AC power supply

Part Number	CDPB

Approach The Bench - Courtroom Quality Muting Switch

Features

- Allows the judge to turn on or of the podium micrphone during attorney discussions at the bench
- Switch is provided for outboard white noise generator
- Status indicator light
- Includes AC power supply

Part Number	CBATB

Approach The Bench - White Noise Generator / Muting Switch

Features

- Allows the judge to turn on or off the podium microphone during attorney discussions at the bench
- Provides an internal white noise generator with 5 second delay
- Status indicator light
- Includes AC power supply

Part Number	CBATBW

The Commentator

Features

- Allows a broadcaster's microphone to be switched between output A (broadcast) or output B (statisticaian / producer)
- Two 1/4" T/R/S inputs for input A (live broadcast) and input B (statistician / producer)
- Inputs are summed into a single headphone jack allowing the broadcaster to hear both signals
- Mixed controls for each input allow complete control over input levels
- Status indicator light
- Includes AC power supply

Part Number	CDCO

CABLE REEL

Ruslyn Cordwheel

Australian designed and manufactured Ruslyn Cordwheel® is a hand held, lightweight, ergonomic, multi function reel used by the Audio/Video and Broadcast industries for the handling and storage of cables used in production and events. Provides Tangle free deployment and retrieval and reels can be stacked together for easy packing and storage.

Features

- Dimenions - Diameter 356mm, Width 109mm, Weight 785gm
- Ergonomic handle and winder knob
- Stainless steel fasteners
- Stackable level guide
- Hose pin hole
- Stiffening ribs
- Changeable mould inserts
- Cable access or terminals
- Terminal or hose access
- Retention ponits
- Cable retainers
- Changeable mould insert

Construction

- Flame retardant
- Chemical resistant
- Impact resistant
- UV stabalized
- Materials ROHS compliant

Suites	Brand & Part Number	Capacity
Flexible Ethernet	Belden 1304A	160m
	Belden 1305A	150m
Microphone Cable	Belden 8412	100m
	Belden 1192A	150m
	Roadworx RW200120	100m
	Roadworx RW20SQ24	150m
Analogue/Digital Video Cable	Belden 9259	150m
	Belden 1505F	150m
	Belden 1694F	100m
	Roadworx RW400122	150m
Analogue Audio Snake	Belden 1904A	70m
	Belden 1908A	40m

Part Number	Description
AUS004754-BW	Ruslyn Cordwheel Cable Reel, Black
AU004754-YW	Ruslyn Cordwheel Cable Reel, Yellow

DISTRIBUTION AMPLIFIERS

Audio Distribution Amplifiers

Part Number	Model	Size	Audio	Inputs	Outputs	Description
PT-102A	1:2 Audio Distribution Amplifier	Pico Tools	U/B	1	2	L & R Level Controls S/N Ratio – 71.6dB
VM-3A	1:3 Mini Audio Distributor	Desktop	Bal	1	3	Level Controls S/N Ratio – 87dB Rack Kit – RK-SM
105A	1:5 Audio Distribution Amplifier	Tools	U/B	1	5	L & R Level Controls S/N Ratio – 80dB
VM-50AN	1:5 Audio Distribution Amplifier	Desktop	B/U	1	5 or 10	B or U Stereo Input 10 Simultaneous Outputs S/N – 84dB L&R Level Controls Rack Kit- RK-50RN

Stereo Analogue Audio Distribution Amplifier

Designed for a wide variety of recording, production, broadcast, and duplication applications, the Model 81 has one stereo input and eight stereo outputs.

Features

- Stereo input with transformerless laser-trimmed circuitry
- ExactCal section allows precise input-level calibration
- 15-turn input trim potentiometers
- 3-pin Neutrik XLR-type input connectors
- Eight independent stereo outputs
- Configurable-10dBV or +4dBu nominal output levels
- 25-pin D-subminiature output connectors
- Inputs and outputs support balanced or unbalanced operation
- Internal ±17V power supply with toroidal mains transformer
- Single rack-space mounting

Part Number Model 81

Audio Distribution Amplifiers (cont.)

Stereo Analogue Distribution Amplifier

Designed for a wide variety of recording, production, broadcast, and duplication applications, the Model 82 has one stereo input and four stereo outputs.

Features

- Stereo input with transformerless laser-trimmed circuitry
- ExactCal section allows precise input-level calibration
- 15-turn input trim potentiometers
- 3-pin Neutrik XLR-type input connectors
- Four independent stereo outputs
- Configurable-10dBV or +4dBu nominal output levels
- Inputs and outputs support balanced or unbalanced operation
- Internal ±17V power supply with toroidal mains transformer
  Single rack-space mounting

Part Number Model 82

AES/EBU Digital Audio Distribution Amplifier

Designed for a wide variety of recording, production, broadcast, and duplication applications, the Model 85 has two AES/EBU inputs and eight AES/EBU outputs.

Features

- Transformer-coupled inputs and outputs
- Flexible configuration options
- Status indicator lights
- XLR-type connectors
- Single rack space mounting
- Rugged construction

Part Number Model 85

BALANCING AMPLIFIERS

Balanced/Unbalanced Stereo Audio Transcoder

The 482xl is a high performance audio transcoder for balanced and unbalanced stereo audio signals. It simultaneously converts balanced stereo signals to unbalanced stereo audio and unbalanced stereo audio signals to balanced stereo audio.

Part Number 482xL

IFB Plus Series

Central Controller

This single rack-space unit contains all the circuitry to implement a sophisticated 2-channel IFB system for electronic news gathering (ENG) and outside broadcast (OB) vans, satellite news gathering (SNG) vehicles, and mobile production facilities. Interruptible foldback (also known as talent cueing) allows reporters and other on-air talent to receive program audio along with audio cues from production personnel, generally directors and producers.

Part Number	Model 2

Access Station

IFB Plus Model 22 and Model 24 Access Stations: Used to access the Model 2's IFB channels, the Model 22 is installed at producer or director locations. Up to four Model 22s can be connected to, and powered by, a Model 2 Central Controller. The Model 24 is installed with two Model 2s to create a 4-channel IFB system, providing producer or director locations with access to IFB channels. Includes five pushbutton switches, one for each IFB channel and "all-call." Up to four Model 24s can be connected to, and powered by, two Model 2 units. Unit are normally installed with a Model 11A Gooseneck Microphone and Model 25A or 27A 19-inch rack adapter.

Part Number	Description
Model 22	Model 22 Access Station
Model 24	Model 24 Access Station

Audio Mixers

Model 740

Specifically designed for ENG and general audio use, this single-rack-space unit features six mic/line inputs, a monaural audio mix bus, a 10-segment LED level meter, and a monitor section.

Features

- Six mic/line inputs
- Setup oscillator with dedicated output
- Studio-quality compressor
- Internal power supply
- Flexible monitor section
- 10-segment LED meter
- All operator controls on front panel

Part Number	Model 740

Model 742

Designed for use in ENG vehicles and various general audio applications, this single rack-space unit features four mic/line inputs, four line inputs, two audio buses, two 10-segment LED level meters, and a monitor section.

Features

- Four mic/line and four line-only inputs
- Setup oscillator with dedicated output
- Studio-quality compressors
- Internal power supply
- Flexible monitor section
- 10-segment LED meters
- All operator controls on front panel

Part Number	Model 742

Model 750

A high-performance audio mixer designed for use in ENG, SNG, and specialized broadcast applications. Features include four mic/line inputs, two stereo line inputs, and two stereo output buses. The unit mounts in two standard rack spaces.

Features

- Four mic/line inputs
- Two stereo line inputs
- Extensive monitor section
- Main and AUX stereo audio buses
- Studio-quality limiter/compressors
- Three isolated main output connections
- Separate speaker and headphone outputs
- Setup section, including voice record/playback and tone generation
- VU meters with peak LEDs
- All operator controls on front panel

Part Number	Model 750

Fibre Optic Transport

Remote Camera Interface System

Live-Link™ Remote Camera Interface System: Designed to handle day-to-day news remote interfacing with ease, Live-Link offers a cost-effective, portable, single-mode optical interface for ENG and OB vans, SNG vehicles, and production trailers. Full support is provided for digital (HD and SD) and analog video, on-air and cue audio, intercom, and Ethernet data. Clear labeling and controls right-where-you-need-them-to-be make the operator learning curve literally minutes. Live-Link is also an ideal infrastructure solution for airports, stadiums, and arenas.

Features

- Transports video, audio, intercom, and data over single-mode optical fibres
- Supports digital and analogue video (HD-/SD-SDI, DVB-ASI, NTSC, and PAL)
- Two mic/line inputs with selectable gain and +48 V phantom power
- Two line-level audio paths for IFB or general-purpose use
- 2-wire-to-4-wire auto nulling hybrids for excellent intercom audio
- Party-line intercom interface with 28 volt belt-pack power
- 10/100 Ethernet with auto MDI/MDI-X
- RS-232/RS-422 for camera control
- GPI/GPO for tally support
- Neutrik opticalCON DUO for fast, reliable fibre connectivity
- Anton/Bauer battery mount standard on Camera End Unit
- Low power consumption allows extended battery operating time
- Industry-standard connectors for all inputs and outputs
- Control Room Unit available in two versions: portable or rack-mount ready

Part Number	Live-Link

Intercom and IFB

Line-Level Audio to IFB Circuit Interface

Optimized for "broadcast booth" and semi-portable applications, these advanced single rack-space units are specifically designed to link matrix intercom systems with IFB-compatible belt packs and announcer's consoles. Both models have four independent channels that create industry-standard IFB circuits, each supplying a 30 volt DC power feed and two audio channels.

Features

- Transformer-coupled inputs
- Excellent audio quality
- Superior power-feed performance
- Four independent IFB circuits
- Universal mains input powering
- Dual LED level meters
- Back-panel IFB output connectors
- Model 42A also has front-panel IFB output connectors.

Part Number	Description
Model 41	Model 41 Line-Level Audio to IFB Circuit Interface
Model 42	Model 42A Line-Level Audio to IFB Circuit Interface

Analogue Audio Interface

2-Wire to 4-Wire Interface

The Model 45 is designed to interface a 2-wire full-duplex party-line intercom circuit with a 4-wire audio circuit associated with a matrix intercom system. Other specialized audio system interfacing applications can also be supported. Applications include television sports and special event broadcasting, theme park and theater installations, corporate events, and industrial testing environments.

Features

- Portable "throw-down" or rack-mount use
- Analog hybrids with auto null capability
- Input and output level metering
- Excellent audio quality
- Flexible powering
- Standard audio connectors
- Transformer-coupled 4-wire inputs and outputs
- Integrated 2-wire intercom power source

Part Number	Model 45

Dual 2-Wire to 4-Wire Interface

Model 46 Dual 2-Wire to 4-Wire Interface: A single rack-space unit that interfaces 2-wire full-duplex party-line intercom circuits with 4-wire audio circuits associated with matrix intercom systems. The unit provides two independent full-featured 2-channel interfaces each with automatic nulling capability. Applications include television sports and specialevent broadcasting, theme park and theater installations, corporate events, and industrial testing environments.

Features

- Two 2-channel party-line intercom interfaces
- Four analog hybrids with auto null capability
- Input and output level metering
- Excellent audio quality
- Integrated intercom power sources
- Standard audio connectors
- Transformer-coupled 4-wire inputs and outputs
- "Universal input" mains powered

Part Number	Model 46

Level Meter / Interface

Model 72 Level Meter / Interface: This compact, portable unit "strips" audio from single- and dual-channel intercom and IFB circuits. The unit is used for numerous broadcast and production applications, as well as serving as a troubleshooting and maintenance aid. The Model 72 is powered by an intercom or IFB line.

Features

- Mode switch for flexible operation
- Excellent audio quality
- Low DC power consumption
- Compatible with standard broadcast circuits
- Compact, lightweight package
- 1/4-inch and 3.5 mm output connectors

Part Number	Model 72

Talent Amplifier

Model 32A

Self-contained amplifier module designed for use by talent or production personnel. A channel selector switch, along with level control, allows either IFB channel to drive a talent earpiece or headset. A combination of up to four Model 32A or Model 33 units can be supported by the Model 2.

Part Number	Model 32A

Model 33

Advanced, self-contained amplifier module designed for use by production personnel. A channel selector switch, along with two level controls, allows either IFB channel, or a user-adjusted mix of the two IFB channels, to drive a talent earpiece or headset. A combination of up to four Model 32A or Model 33 units can be supported by the Model 2's talent amplifier output.

Part Number	Model 33

Model 34

A self-contained amplifier module designed for use with single- or 2-channel IFB systems, the Model 34 features dual level controls, a mono/stereo switch, and both ¼-inch and 3.5 mm output jacks. The unit can be used with Models 41 or 42A Interfaces. These units are fully compatible with industry-standard RTS® 4000-series IFB systems.

Part Number	Model 34

ANNOUNCERS CONSOLE

Announcer's Console

Model 210

The Model 210 Announcer's Console is an audio control "hub" for announcers, commentators, and production personnel. Compatible with essentially all broadcast and production audio system environments, the tabletop unit is often used for on-air sports broadcasting.

An advanced unit suitable for a variety of applications, including on-air television sports broadcasting. Features include an IFB input and single talkback output. Many configurable features are contained in this compact tabletop unit.

Part Number	Model 210

Model 212

The Model 212 Announcer's Console is an audio control "hub" for announcers, commentators, and production personnel that features digital audio input and output resources. The broadcast-standard interfaces allow direct integration of the table-top unit into contemporary "all-digital" environments.

This digital audio version supports a variety of applications, including on-air television and radio broadcasting, voice-over booths, and stadium announcement. The compact tabletop unit provides excellent audio quality and includes many configurable operating parameters. Features include AES3id (unbalanced coax) digital inputs and outputs, a bidirectional digital interface, and optional AES3 (balanced) digital inputs and outputs.

Part Number	Model 212

Announcer's Console (Cont.)

Model 220

The Model 220 Announcer's Console is an enhanced audio control "hub" for announcers, commentators, and production personnel. Compatible with essentially all broadcast and production audio system environments, the tabletop unit is a great choice for on-air television and radio broadcast.

An enhanced unit that supports a variety of applications, including on-air television and radio broadcasting. Features include an IFB input, two line-level audio inputs, and two talkback outputs. The tabletop unit includes numerous configurable parameters and resources.

Part Number	Model 220

Model 230

The Model 230 Announcer's Console is a powerful audio control "hub" for announcers, commentators, and production personnel. Compatible with essentially all broadcast and production audio system environments, the tabletop unit is well suited for on-air television and radio broadcast, and live-event production.

This feature-rich unit supports numerous applications, including on-air television and radio broadcasting, stadium announcement, and live-event production. Resources include an IFB input, two line-level audio inputs, a sophisticated dual-channel intercom interface, and a single line-level audio talkback output. The tabletop unit includes extensive configurable parameters and excellent audio performance throughout.

Part Number	Model 230

Model 233

The Model 233 Announcer's Console is the premier audio control "hub" for announcers, commentators, and live-event production personnel. Compatible with essentially all broadcast and production audio system environments, the tabletop unit is ideally suited for numerous applications including stadium announce, on-air television, and radio broadcasting.

This high-performance unit supports specialized applications such as stadium announcement and live-event production. Available resources include an integrated sidetone section, two line-level audio talkback outputs, two line-level audio inputs, a sophisticated dual-channel intercom interface, and a tally output. The tabletop unit provides great audio performance, numerous user features, and excellent audio performance.

Part Number	Model 233

Announcer's Console Interface

Model 44

Designed to work with 200-series announcer's consoles, the unit serves as an interconnection "hub," providing power and signal routing for up to six announcer's consoles. Appropriate for in-studio as well as field broadcast applications. Of special note is its applicability for use in the live television sports industry.

Features

- Standard RJ45 connectors
- Individual current-limited DC outputs
- Redundant internal power supplies
- Universal mains input powering
- Single rack-space mounting
- Six independent circuits

Part Number	Model 44

Announcer's Console Comparison Chart

Use the feature comparison chart below to find out which console is right for your application.

STUDIO TECHNOLOGIES INC.

Feature Comparison	Model 210	Model 220	Model 230	Model 233	(Digital) Model 212
48 V Phantom Power	•	•	•	•	•
Analogue Line-Level Main Output	•	•	•	•	
Analogue Mic-Level (Direct) Main Output		Optional	Optional	Optional	Optional
Analogue Line-Level Talkback Output	1	2	1, Opt. 2nd	2	
Audio Compressor	•	•	•	•	•
Analogue Line-Level Inputs	Optional	2	2	2	Optional
Analogue IFB Input	•	•	•		
AES3id (BNC) Digital Output (Main & Talkback Out)					•
AES3id (BNC) Digital Input (Headphone In 1 & 2)					•
Bidirectional Digital Interface (Main & Talkback Out, Headphone In 1 & 2)					•
AES3 (XLR) Digital Output (Main & Talkback Out)					Optional
AES3 (XLR) Digital Input (Headphone In 1 & 2)					Optional
Analogue Intercom Interface			•	•	
Programmable Sidetone			•		
Independent Sidetone Level Control				•	
Stadium Announce Mode				•	
Flexible Headphone Routing & Control	•	•	•	•	•
Auxiliary Relay Contacts		•	•	•	•
"Click-Free" Audio Switching	•	•	•	•	•
Programmable Operating Modes	•	•	•	•	•
LED Status Indicators	•	•	•	•	•
Integrated Main Output Tally				•	
Microcomputer Controlled	•	•	•	•	•
Spare Connector Locations	2	3	3	3	2
Powering	IFB or External 24 Vdc	IFB or External 24 Vdc	IFB, Intercom, or External 24 Vdc	Intercom or External 24 Vdc	External 24 Vdc
24 Vdc Power Source Included	•	•	•	•	•
Simple Button Labeling	•	•	•		

Sound Pressure Level Monitoring System

Monitoring Unit

An innovative hardware platform designed for the Internet, LAN, and wireless communications.

Features

- Advanced DSP processing provides SPL measurements and industry-standard algorithms including: A, C, and Z spectral weighting; almost unlimited possible calculated functions using: Lmax, Lmin, Leq, Ln Lp
- Embedded DSP features are configurable using web software
- Open Architecture design provides a flexible Information Technology platform
- Indoor and outdoor applications
- Compliant with Transducer Electronic Data Sheets (TEDS) standard IEEE 1451.4 providing auto identification and calibration data with Class 1 or Class 2 microphones
- Programmable using SNMP and Email/SMS event alerts and triggers
- IEC 61672-1-2002 & ANSI S1.43-1997 Compliant

Model 100

Model 112

Product Feature	Model 100	Model 112
PoE Powered	•	
DC Powered (10-18 Volt DC)		•
Integrated LED Array	•	
Programmable Contact Closure	•	•
A, C, and Z Weighting	•	•
1/1- and 1/3-Octave Analysis	Optional	Standard
Analog Audio Output	•	•
Extended Dynamic Range		•
10/100 Ethernet	•	•
Constant Current Microphone Input	•	•
SNMP Accessible/SNMP Traps	•	•
IEC 61672 SPL Meter Compliance	•	•
IEC 1260 Frequency Band Compliance	•	•
DIN 45657 Percentile Compliance	•	•
Temperature/Humidity Sensing Capable	Basic	Advanced
Wind Speed/Wind Direction Capable		•
Wall-Mount Enclosure	•	•

SPL Microphones

High-quality measurement microphones and preamplifiers designed for SPLmonitoring unit.

Features

- High-quality measurement microphones and preamplifiers deliver maximum accuracy and reliability
- Class 1 and Class 2 microphones
- Compliant with Transducer Electronic Data Sheet (TEDS) standard IEEE 1451.4 providing auto identification and calibration data

Model 121

Model 122

Specifications

Part Number	Model 121	Model 122
Description	Class 1, ½-inch free-field pre-polarized microphone with TEDS CCP (constant current power) preamplifier	Class 2, ½-inch free-field pre-polarized microphone with TEDS CCP (constant current power) preamplifier
Power	CCP, 20 to 30 Vdc, 4 to 20 mA	CCP, 20 to 30 Vdc, 4 to 20 mA
TEDS Compatibility	IEEE 1451.4 v1.0, Template 27	IEEE 1451.4 v1.0, Template 27
Dimensions	½-inch (12.7 mm) diameter, 3.94-inch (100 mm) length	½-inch (12.7 mm) diameter, 3.94-inch (100 mm) length
Optimized Frequency Response	20 Hz to 20 kHz	20 Hz to 12.5 kHz
Nominal Sensitivity	50 mV/Pa	40 mV/Pa
Maximum SPL (3% THD)	130 dB	132 dB
Equivalent Noise Level	18 dBA	25 dBA
Output Impedance	110 ohms	110 ohms
Maximum Output Voltage	4.5 Vrms	4.5 Vrms
Connector	BNC	BNC

SPLCcapture™ Software

PC-based real-time analyzer, sound pressure level display, and data recorder.

Features

- Graphically displays audio spectra data and industry-standard algorithms provided by SPLmonitoring unit
- Records SPL data in a log file
- Provides standard reports
- Integrates seamlessly with SPLmonitoring unit

Part Number	SPLCAP-01

Loudspeaker Monitoring Control Systems

7.1 Surround

StudioComm Model 78

The Model 78 Central Controller is a single rack-space unit that contains analog, digital, and power supply electronics. Two 8-channel analog sources can be connected. In many applications the first input, Surround A, will be connected to a multi-channel output on an audio console or digital audio workstation. The second input, Surround B, will be connected to a playback device, such as a multitrack tape recorder or disk storage system. For film or video post applications Surround A would be considered the direct source, while Surround B would be considered the playback source. For flexibility, the inputs are compatible with balanced or unbalanced signals having a nominal level range of –12 dBV to +6 dBu. Fifteen-turn trim potentiometers are used to precisely calibrate the input signals.

Part Number	Model 78

StudioComm Model 79

The Model 79 Control Console is a compact self-contained unit designed to be located at the operator's position. It allows fingertip control of all monitoring parameters. Numerous LED indicators provide complete status information. A 4-digit numeric display indicates the monitor output level in real time. A major strength of the Model 79 is its ability to configure, under software control, a number of operating parameters. For example, during the installation and calibration process, the relative levels of the monitor output channels can be adjusted. This helps to ensure that maximum performance from the loudspeaker system can be easily obtained. All configuration parameters are stored in nonvolatile memory.

Part Number	Model 79

5.1 Surround

StudioComm Model 68A

The Model 68A Central Controller is a single rack-space unit that contains analog, digital, and power supply electronics. Four analog sources can be connected: two surround (5.1) and two stereo. In many applications the first surround input, Surround A, will be connected to a multi-channel output on an audio console or digital audio workstation. The second surround input, Surround B, will be connected to a playback device, such as a multitrack tape recorder or disk storage system. For film or video post applications Surround A would be considered the direct source, while Surround B would be considered the playback source.

Part Number	Model 68A

StudioComm Model 69A

The Model 69A Control Console is a compact, self-contained unit designed to be located at the operator's position. It allows fingertip control of all monitoring parameters. Numerous LED indicators provide complete status information. A major strength of the Model 69A is its ability to configure, under software control, a number of operating parameters. All configuration parameters are stored in non-volatile memory.

Part Number	Model 69A

5.1 Surround (cont.)

Surround Monitoring System - Model 76

Rack mountable and offers two surround (5.1) and three stereo (2-channel) digital inputs that are compatible with AES3id sources. Sample rates of up to 192 kHz and bit depth of up to 24 are directly supported. Exceptional dynamic range and extremely low distortion ensure that the audio quality of each source is maintained. It has eight analog balanced line-level outputs organized as Surround (5.1) and Stereo (2-channel).

Part Number	Model 76

Surround Monitoring System - Model 76D

Rack mountable and offers two surround (5.1) and three stereo (2-channel) digital inputs that are compatible with AES3id sources. Sample rates of up to 192 kHz and bit depth of up to 24 are directly supported. Exceptional dynamic range and extremely low distortion ensure that the audio quality of each source is maintained. Sample rate conversion (SRC) is available on one input (stereo input C).

Part Number	Model 76D

Surround Monitoring System - Model 77

Designed to reside at an operator's location, it allows fingertip selection of all monitoring functions. Numerous LED indicators provide complete status information. Five buttons and associated LEDs enable quick selection of the surround and stereo input sources to be monitored. A large, easy-to-use rotary digital encoder provides control of the surround monitor output level in precise 0.5-dB steps. A 4-digit readout displays the level of the monitor output. The monitor output level can be adjusted via the rotary level control or pre-set using the reference level function.

Part Number	Model 77

Surround Monitoring System - 76B

Rack mountable and offers two surround (5.1) and three stereo (2-channel) digital inputs that are compatible with AES3id sources. Sample rates of up to 192 kHz and bit depth of up to 24 are directly supported. Exceptional dynamic range and extremely low distortion ensure that the audio quality of each source is maintained. The Model 76 Central Controller has eight analog balanced line-level outputs organized as Surround (5.1) and Stereo (2-channel).

Part Number	Model 76B

Surround Monitoring System - 77B

Designed to reside at an operator's location, it allows fingertip selection of all monitoring functions. Numerous LED indicators provide complete status information. Up to six unique input choices are available. Each of the choices can be configured from the system's two surround (5.1) and three stereo (2-channel) inputs. The configuration mode also allows stereo inputs A and B to be used as either stereo or dual monaural sources. This can be especially useful in broadcast applications where a 2-channel AES3id source may carry two independent monaural signals.

Part Number	Model 77B

5.1 Surround (cont.)

Surround Monitoring System - 76DB

Rack mountable and offers two surround (5.1) and three stereo (2-channel) digital inputs that are compatible with AES3id sources. Sample rates of up to 192 kHz and bit depth of up to 24 are directly supported. Exceptional dynamic range and extremely low distortion ensure that the audio quality of each source is maintained. Sample rate conversion (SRC) is available on one input (stereo input C). It provides 16 digital output channels with transformer-coupled outputs and selectable impedance (75 or 110 ohms). The Model 76DB's sync input allows support for video (bi-level and tri-level), word clock, DARS, and AES3id. There is also an auxiliary stereo (2-channel) output for special applications such as monitoring site-event cue signals. In addition, up to 340 milliseconds of digital delay can be selected to compensate for processing delays in an associated video path.

Part Number	Model 76DB

Compact Control Console

Model 71 Control Console

A compact "command center" for use with a StudioComm 76/77, 76D/77, 76B/77B, or 76DB/77B system. Provides additional user locations with the most frequently desired functions: level adjustment, reference level, and dim Up to three Model 71s can be connected to, and powered by, a central controller.

Part Number	Model 71

Base Manager

Model 65

An analog processor designed to allow enhanced multi-channel monitoring. While designed to directly connect to the Model 68A Central Controller, the Model 65 is compatible with virtually every monitor system. The single-rack-space unit provides a "5.1" input, five main outputs, and two subwoofer outputs.

Part Number	Model 65

Stereo

Monitoring System with Talkback - Model 55

The Model 55 is the connection point for all audio inputs and outputs, and provides power for the Model 56 and the talent amplifiers. Front panel LEDs indicate the functional status of the Model 56 and the talent amplifiers, and data flow from the Model 56.

Part Number	Model 55

Monitoring System with Talkback - Model 56

The Model 56 provides a small but comfortable command center. All routing, switching, and level adjustment functions are located on the control console. Numerous LEDs provide complete status information. Its unique configure mode provides extensive flexibility. It contains an electret condenser microphone located near the top of the console for convenient wide-range voice pickup.

Part Number	Model 56

Stereo (cont.)

Monitoring System - Model 60A

The single rack-space Model 60A contains the main StudioComm electronics. It is intended to be located in an equipment rack adjacent to the audio work area. The back panel provides standard connectors to interface audio input and output signals. The front panel contains many of the operating switches and controls.

Part Number	Model 60A

Monitoring System - Model 61

The Model 61 is a compact "command center" providing the most frequently used operator functions. It is designed to be placed at the main audio work surface, giving personnel rapid, fingertip adjustment of the control room level and access to the monaural and headphone cue functions. For convenient wide-range voice pickup an electret condenser microphone is located near the top of the console. A 5-conductor MIDI-style cable links the Model 61 with the Model 60A Central Controller.

Part Number	Model 61

Patching Systems

Audio Patching Systems - 78

Video Patching Systems - 84

Data Patch Bays - 87

Accessories - 87

Bittree has been providing innovative and high quality patching systems to the broadcast, entertainment and A/V industries for nearly 30 years. Audio, Video and Serial Data (RS-422) versions are available, as well as integrated patch bays combining these patching requirements into a single unit.

Bittree offers two formats of audio patch bays: TT Bantam , and Long Frame (1/4"). All Bittree audio patch bays bring you enhanced studio versatility and instant signal re-routing, and are perfect for master control and central switching I/O, audio console I/O, recording devices I/O, and audio routing switcher bypass and input rerouting. These audio patch bays are built to AES/EBU specifications, and are internally wired with low-capacitance, shielded, 110-ohm twisted pairs. The low-capacitance characteristics make them ideal for both analog as well as digital applications.

TT Bantam Audio Patching Systems

Bittree produces three lines of Audio Bantam patch bays – the 969 series, the 968 series and the 961 series.

969 Series - Programmable

Innovative "Programmable" audio patch bays. With programmable patch bays, you can change the normaling and grounding of individual circuits just by changing the shunt arrangement under the designation strips. Simply remove the two strips, re-arrange the vertical (normaling) and horizontal (grounding) shunts, and you'll reconfigure your patching system quickly and cost-effectively. The 969 Series is available in 1.5 and 2RU enclosed chassis and a jack configuration of 2x48, with a variety of other options.

Features

- Jacks rated to 30,000 minimum insertion cycles
- Copper-nickel-silver alloy leaf springs with gold-plated cross bar switching contacts and nickel-plated sleeve bushings
- Precision-stamped reinforced steel jack frame
- Gold-plated contacts used in E3 and E90 rear interface
- Wired with low-capacitance, AES/EBU-rated shielded, twisted pair
- Large user-friendly designation strips
- Panels made from 3/16" solid aluminium with a durable powder-coat finish
- Mating connectors, contacts and normals (where applicable) are included with all standard rear interfaces
- Normals and grounding for individual circuits can be easily changed by the end-user
- Programming shunts located under designation strips; Normaling shunts are placed vertically and Grounding shunts are placed horizontally

Options

- Available in 1.5 or 2 rack units (RU)
- Fully enclosed chassis available in 7" or 12" depth
- Wide range of rear interfaces available, including E3, E90 and ID (punchdown)
- Normals can be pre-programmed to full-normal, half-normal or non-normal
- Grounding can be pre-programmed to bussed, isolated or looped
- Black or grey front panel

Part Number Matrix

B 96 D C - FN P I T /E3 M 2OU 12 B

Jack Type
B = Bantam (TT)
Depth
12 = 12" Deep Chassis
7 = 7" Deep Chassis
Designation Strips
2OU = 2 Designation Strips Over/Under
Spacing
M = Mono Spacing
Rear Interface
E3 = 3 Pin
E90 = 90 Pin
ID = Punchdown
Panel Height
T = 2RU **H** = 1.5RU
Grounding
B = Bussed
I = Isolated
L = Looped
Normaling
P = Programmable
Type of Normaling
FN = Full-Normal
HN = Half-Normal
NN = Non-Normal
Style
C = Chassis
Wiring
D = Digital compatible wiring
Quantity of Patch Ports
96 = 2x48
Color Choice
B = Black
G = Grey

BLACK 2x48 22RU MONO SPACING OVER/UNDER DESIGNATION

BLACK 2x48 1.5RU MONO SPACING OVER/UNDER DESIGNATION

2x48 E3 2RU (REAR)

2x48 E90 2RU (REAR)

2x48 ID 2RU (REAR)

968 Series - Programmable

Innovative "Programmable" audio patch bays in a 1 RU size. With programmable patch bays, you can change the normaling and grounding of individual circuits just by changing the shunt arrangement underneath the patch bay dust cover. Simply remove cover, re-arrange the normaling and grounding shunts, and you'll reconfigure your patching system quickly nd cost-effectively. The 968 Series is available in a 1 RU enclosed chassis and a jack configuration of 2x48, with a variety of other options.

Features

- Jacks rated to 30,000 minimum insertion cycles
- Copper-nickel-silver alloy leaf springs with gold-plated cross bar switching contacts and nickel-plated sleeve bushings
- Precision-stamped reinforced steel jack frame
- Gold-plated contacts used in E3 and E90 rear interface
- Wired with low-capacitance, AES/EBU-rated shielded, twisted pair
- Large user-friendly designation strips
- Panels made from 3/16" solid aluminium with a durable powder-coat finish
- Mating connectors, contacts and normals (where applicable) are included with all standard rear interfaces
- Normals and grounding for individual circuits can be easily changed by the end-user
- Programming shunts located underneath the patch bay dust cover

Options

- Available in 1 rack unit (RU)
- Fully enclosed chassis available in 7" or 12" depth
- Wide range of rear interfaces available, including E3, E56, E90 and DB25
- Normals can be pre-programmed to full-normal, half-normal or non-normal
- Grounding can be pre-programmed to bussed, isolated or looped
- Black or grey front panel

Part Number Matrix

B 96 D C - FN I I S /E3 M 2OU 12 B

Jack Type
B = Bantam (TT)
Depth
5 = 5" Deep Chassis
12 = 12" Deep Chassis
7 = 7" Deep Chassis
Designation Strips
2OU = 2 Designation Strips Over/Under
Spacing
M = Mono Spacing
Rear Interface
E3 = 3 Pin
E90 = 90 Pin
Panel Height
S = 1RU
Grounding
B = Bussed
I = Isolated
L = Looped
S = Switched (968-S Series only)
Normaling
I = Internally Programmable
Type of Normaling
FN = Full-Normal
HN = Half-Normal
NN = Non-Normal
Style
C = Chassis
Wiring
D = Digital compatible wiring
Quantity of Patch Ports
96 = 2x48
Color Choice
B = Black
G = Grey

BLACK2x48 1RU MONOSPACING OVER/UNDERDESIGNATION

2x48 E3 1RU (REAR)

2x48 E90 1RU (REAR)

2x48 E3 1RU (REAR)

2x48 E56 1RU (REAR)

961 Series - Non Programmable

The classic 2 x 48 original bantam audio patch bay. Non-programmable audio patch bays, with a jack configuration of 2x48, the 961 Series comes with the most options of any audio patch bay, including rear panel configurations, normals, grounds, stereo spacing, panel colour and rack-unit height.

Features

- Jacks rated to 30,000 minimum insertion cycles
- Copper-nickel-silver alloy leaf springs with gold-plated cross bar switching contacts and nickel-plated sleeve bushings
- Precision-stamped reinforced steel jack frame
- Gold-plated contacts used in E3 and E90 rear interface
- Wired with low-capacitance, AES/EBU-rated shielded, twisted pair
- Large user-friendly designation strips
- Panels made from 3/16" solid aluminium with a durable powder-coat finish
- Mating connectors, contacts and normals (where applicable) are included with all standard rear interfaces

Options

- Available in 1, 1.5 or 2 rack units (RU)
- Fully enclosed chassis available in 7" or 12" depth
- Harness available as a 48" standard, or custom length
- Wide range of rear interfaces available, including E3, E90, and ID (punchdown)
- Normals can be pre-programmed to full-normal, half-normal or non-normal
- Normals looped internally or brought out to the rear interface
- Grounding can be pre-programmed to bussed, isolated, looped or switched
- Mono or stereo jack spacing
- Over/under or over/over designation strips
- Black or gray front panel

Part Number Matrix

B 96 D C - FN L I T /E3 M 2OU 12 B

Jack Type
B = Bantam (TT)

Depth
12 = 12" Deep Chassis **7** = 7" Deep Chassis
48 = 48" Long Chassis

Designation Strips
2OU = 2 Designation Strips Over/Under
2OO = 2 Designation Strips Over/Over

Spacing
M = Mono Spacing **S** = Stereo Spacing

Rear Interface
E3 = 3 Pin
E90 = 90 Pin
ID = Punchdown

Panel Height
S = 1RU
H = 1.5RU
T = 2RU

Grounding
B = Bussed
L = Looped
I = Isolated
S = Switched

Normaling
N = No Normals
L = Normals looped internally
O = Normals brought out to the rear

Type of Normaling
FN = Full-Normal
HN = Half-Normal
NN = Non-Normal

Style
C = Chassis
H = Harness

Wiring
D = Digital compatible wiring

Quantity of Patch Ports
64 = 2x32
96 = 2x48

Color Choice
B = Black
G = Grey

BLACK2x48 1RU STEREO SPACING OVER/UNDERDESIGNATION

BLACK2x48 1RU MONOSPACING OVER/OVER DESIGNATION

2x48 E3 1RU (REAR)

2x48 E90 1RU (REAR)

2x48 E90 1RU NORMALS OUT (REAR)

BLACK2x48 1.5 RU MONO SPACING OVER/OVERDESIGNATION

Longframe (1/4”) Audio Patching systems

Bittree produces four lines of Audio Longframe patch bays – the 489 series, the 488 series, the 481 series and the 521 series.

489 Series - Programmable

Innovative “Programmable” audio patch bays. With programmable patch bays, you can change the normaling and grounding of individual circuits just by changing the shunt arrangement under the designation strips. Simply remove the two strips, rearrange the vertical (normaling) and horizontal (grounding) shunts, and you’ll reconfigure your patching system quickly and cost-effectively. The 489 Series is available in 1.5 and 2 RU enclosed chassis and a jack configuration of 2x24, with a variety of other options.

Features

- Jacks rated to 30,000 minimum insertion cycles
- Copper-nickel-silver alloy leaf springs with gold-plated cross barswitching contacts and nickel-plated sleeve bushings
- Precision-stamped reinforced steel jack frame
- Gold-plated contacts used in E3 and E90 rear interface
- Wired with low-capacitance, AES/EBU-rated shielded, twisted pair
- Large user-friendly designation strips
- Panels made from 3/16” solid aluminium with a durable powder-coat finish
- Mating connectors, contacts and normals (where applicable) are included with all standard rear interfaces
- Normals and grounding for individual circuits can be easily changed by the end-user
- Programming shunts located under designation strips; Normaling shunts are placed vertically and Grounding shunts are placed horizontally

Options

- Available in 1.5 or 2 rack units (RU)
- Fully enclosed chassis available in 7” or 12” depth
- Wide range of rear interfaces available, including E3, E90 and ID (punchdown)
- Normals can be pre-programmed to full-normal, half-normal or non-normal
- Grounding can be pre-programmed to bussed, isolated or looped
- Black or gray front panel

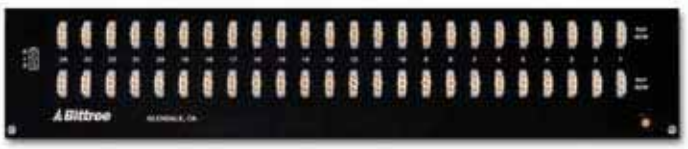
Part Number Matrix

B 48 D C - FN P I T /E3 M 2OU 12 L

Jack Type
L = Long Frame (1/4”)
Depth
12 = 12” Deep Chassis
7 = 7” Deep Chassis
Designation Strips
2OU = 2 Designation Strips Over/Under
Spacing
M = Mono Spacing
Rear Interface
E3 = 3 Pin
E90 = 90 Pin
ID = Punchdown
Panel Height
H = 1.5RU
T = 2RU
Grounding
B = Bussed
I = Isolated
L = Looped
Normaling
P = Programmable
Type of Normaling
FN = Full-Normal
HN = Half-Normal
NN = Non-Normal
Style
C = Chassis
Wiring
D = Digital compatible wiring
Quantity of Patch Ports
48 = 2x24
Color Choice
B = Black
G = Grey

BLACK2x24 2RU MONOSPACING OVER/UNDERDESIGNATION

2x24 E90 2RU (REAR)



2x24 E3 2RU (REAR)

2x24 ID (PUNCHDOWN) 2RU (REAR)

488 Series - Programmable

Innovative "Programmable" audio patch bays in a 1 RU size. With programmable patch bays, you can change the normaling and grounding of individual circuits just by changing the shunt arrangement underneath the patch bay dust cover. Simply remove cover, rearrange the normaling and grounding shunts, and you'll reconfigure your patching system quickly and cost-effectively.
The 968 Series is available in a 1 RU enclosed chassis and a jack configuration of 2x24, with a variety of other options.

Features

- Jacks rated to 30,000 minimum insertion cycles
- Copper-nickel-silver alloy leaf springs with gold-plated cross bar switching contacts and nickel-plated sleeve bushings
- Precision-stamped reinforced steel jack frame
- Gold-plated contacts used in E3 and E90 rear interface
- Wired with low-capacitance, AES/EBU-rated shielded, twisted pair
- Large user-friendly designation strips
- Panels made from 3/16" solid aluminium with a durable powder-coat finish
- Mating connectors, contacts and normals (where applicable) are included with all standard rear interfaces

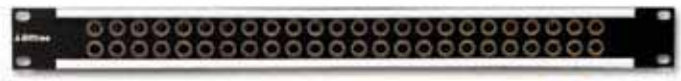
Options

- Available in 1, 1.5 or 2 rack units (RU)
- Fully enclosed chassis available in 7" or 12" depth
- Harness available as a 48" standard, or custom length
- Wide range of rear interfaces available, including E3, E90, ID (punchdown), E56, DB25 and others
- Normals can be pre-programmed to full-normal, half-normal or non-normal
- Normals looped internally or brought out to the rear interface
- Grounding can be pre-programmed to bussed, isolated, looped or switched
- Mono or stereo jack spacing
- Over/under or over/over designation strips
- Black or grey front panel

Part Number Matrix

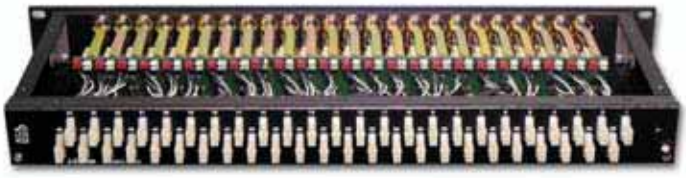
B 48 D C - FN I I S /E3 M 2OU 12 L

Jack Type
L = Long Frame (1/4")
Depth
12 = 12" Deep Chassis
7 = 7" Deep Chassis
Designation Strips
2OU = 2 Designation Strips Over/Under
Spacing
M = Mono Spacing
Rear Interface
E3 = 3 Pin
E90 = 90 Pin
ID = Punchdown
Panel Height
S = 1RU
Grounding
B = Bussed
L = Looped
I = Isolated
Normaling
I = Internally Programmable
Type of Normaling
FN = Full-Normal
HN = Half-Normal
NN = Non-Normal
Style
C = Chassis
Wiring
D = Digital compatible wiring
Quantity of Patch Ports
48 = 2x24
Color Choice
B = Black
G = Gray



BLACK2x24 1RU MONOSPACING OVER/UNDERDESIGNATION

2x24 E3 1RU (REAR)



2x24 E3 1RU (REAR) WITH COVER REMOVED AND PROGRAMMING SHUNTS SHOWN

2x24 E90 1RU (REAR)

481 and 521 series - Non Programmable

Classic, non-programmable audio patch bays. With a jack configuration of 2 x 24 or 2 x 26 this series comes with the most options of any audio patch bay, including rear panel configurations, normals, grounds, stereo spacing, panel colour and rack-unit height.

Features

- Jacks rated to 30,000 minimum insertion cycles
- Copper-nickel-silver alloy leaf springs with gold-plated cross bar switching contacts and nickel-plated sleeve bushings
- Precision-stamped reinforced steel jack frame
- Gold-plated contacts used in E3 and E90 rear interface
- Wired with low-capacitance, AES/EBU-rated shielded, twisted pair
- Large user-friendly designation strips
- Panels made from 3/16" solid aluminium with a durable powder-coat finish
- Mating connectors, contacts and normals (where applicable) are included with all standard rear interfaces

Options

- Available in 1, 1.5 or 2 rack units (RU)
- Fully enclosed chassis available in 7" or 12" depth
- Harness available as a 48" standard, or custom length
- Wide range of rear interfaces available, including E3, E90, and ID (punchdown)
- Normals can be pre-programmed to full-normal, half-normal or non-normal
- Normals looped internally or brought out to the rear interface
- Grounding can be pre-programmed to bussed, isolated, looped or switched
- Mono or stereo jack spacing
- Over/under or over/over designation strips
- Black or gray front panel

BLACK2x24 1RU MONOSPACING OVER/UNDERDESIGNATION

BLACK 2x24 1RU MONOSPACING OVER/OVERDESIGNATION

2x24 E3 1RU (REAR)

2x24 E3 1RU NORMALS OUT (REAR)

Part Number Matrix

B 48 D C - FN L I T /E3 M 2OU 12 L

Jack Type
L = Long Frame (1/4")
Depth
12 = 12" Deep Chassis
48 = 48" Long Harness
7 = 7" Deep Chassis
Designation Strips
2OU = 2 Designation Strips Over/Under
2OO = 2 Designation Strips Over/Over
Spacing
M = Mono Spacing
S = Stereo Spacing
Rear Interface
E3 = 3 Pin
E90 = 90 Pin
ID = Punchdown
Panel Height
S = 1RU
H = 1.5RU
T = 2RU
Grounding
B = Bussed
I = Isolated
L = Looped
S = Switched
Normaling
N = No Normals
L = Normals looped internally
O = Normals brought out to the rear
Type of Normaling
FN = Full-Normal
HN = Half-Normal
NN = Non-Normal
Style
C = Chassis
H = Harness
Wiring
D = Digital compatible wiring
Quantity of Patch Ports
48 = 2x24
52 = 2x26
Color Choice
B = Black
G = Grey

Normals out patchbays bring the normals to the rear interface so that if desired the user may de-normal a circuit by removing a jumper. The 3-pin rear interface always brings the shield to the rear interface. To loop the ground use a three-wire jumper (Normal 3-E); to isolate the ground use a two-wire jumper (Normal 2-E). Note: E90 normals out models to not bring the ground to the normals out connector.

2x24 E90 1RU (REAR)

2x24 E90 1RU NORMALS OUT (REAR)

AES Unbalanced Digital Audio Patchbay

Developed specifically for today's digital audio environment, this patchbay serves as the ideal foundation for lower-cost, more reliable and easier-to-install digital audio patching systems. The key lies in the patchbay's hybrid bantam/BNC jack – featuring a patent-pending 75-ohm bantam jack with BNC rear interface. The new jack – coupled with Bittree's new 75-ohm patchcord – helps you easily and reliably connect equipment using existing or new 75-ohm coaxial infrastructures.

Features

- Jacks conform to AES 75-ohm unbalanced audio standards
- Hybrid Bantam (TT) audio jacks with BNC connectors
- Extra-wide designation strips
- Jacks rated to 30,000 minimum insertion cycles
- Rugged nickel-plated, cold-rolled steel, box frame jack construction
- Copper-nickel-silver alloy leaf springs with gold-alloy cross bar switching contacts and nickel-plated sleeve bushings
- Panels made from 3/16" solid aluminium with durable powder-coat finish

Options

- Circuit ID numbers (1-32, left to right) clearly indicated on patchbay front
- 2 x 32 jack configuration; available in 1, 1.5 or 2 RU
- Normal I/O paired ports
- Black or grey front panel
- Jacks are isolated from the panel
- Uses lower-cost, ultra-reliable, unbalanced 75-ohm hybrid bantam/coaxial patchcords

Part Number	Description
B64S-AV75	2 x 32, 1 RU, Full-Normal
B64H-AV75	2 x 32, 1.5 RU, Full-Normal
B64T-AV75	2 x 32, 2 RU, Full-Normal
B64S-AV75N	2 x 32, 1 RU, Non-Normal
B64H-AV75N	2 x 32, 1.5 RU, Non-Normal
B64T-AV75N	2 x 32, 2 RU, Non-Normal

AES Unbalanced Bantam Patchcord Part Number Matrix

AVPC 12 02

Colour
02=Red

Length in inches (cm)
12 (30)
24 (61)
36 (92)
48 (122)
30 (153)
72 (183)

Video Patching Systems

Bittree offers a full line of video patch bays. Whether you need high-bandwidth or component, WECO or Mini WECO, Bittree is a one stop source for reliable, durable patch bays. Bittree video patch bays are designed for exceptional performance in high bit-rate applications such as HDTV, SDI, AES and high-resolution computer graphics, as well as conventional analog applications.

WECO vs Mini-WECO

Traditionally, most video patching systems use the WECO standard jack, developed by the Western Electric Company years ago. WECO patch bays are considered easier to work with due to their spacious jack configuration, while mini WECO patch bays are ideal for higher density patching, and the highest-bandwidth applications.

Features

- 30,000 minimum insertion cycles
- High bandwidth performance up to 3GHz
- Jacks conform to SMPTE 259M and SMPTE 292M
- Panels made from 3/16" solid aluminium
- Durable powder-coat finish
- Jacks are isolated from the panel
- Extra-wide designation strips

Options

- Composite (high bandwidth) video jack count may be specified as one or two rows of 24, 26 or 28 (WECO) or 32 (Mini-WECO)
- Available in 1, 1.5 or 2 rack units (RU)
- Black or gray front panel
- Jacks may be ordered in four different configurations:
  Dual, Self Normaling, Non Terminated
  Dual, Self Normaling, Terminated
  Single, self terminating
  Single, non-terminating

WECO High Bandwidth Composite Type

Standard Video Patch bay, featuring 24, 26 or 28 jacks per row, with 75-ohm high-frequency jacks and a BNC rear interface.

Features

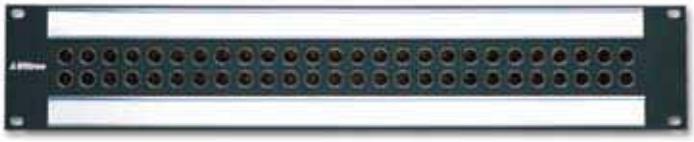
- BNC rear interface
- SVHS video can be patched using two patch points and a TCS-418 adaptor on the rear BNC interface

Options

- Composite video jack count may be specified as one or two rows of 24, 26 or 28
- Jacks may be ordered in four different configurations:
  Normalled / Terminated
  Normalled / Non-Terminated
  Non-Normalled / Terminated
  Non-Normalled / Non-Terminated

GRAY 1x24 1RU

BLACK 2x24 1.5RU



BLACK 2x26 2RU

Part Number Matrix

B 48 T - 2 W N HD

Bandwidth
HD= High Definition (2.5GHz)

Jack Termination
N = Non-Terminating
T = Terminating

Jack Standard
W = Weco

Jack Type
2 = Normalling
1 = Non-Normalling

Panel Height
S = 1RU
H = 1.5RU
T = 2RU

Quantity of Patch Ports
24 = 1x24 (1RU Only)
26 = 1x26 (1RU Only)
28 = 1x28 (1RU Only)
48 = 2x24
52 = 2x26
56 = 2x28

Color Choice
B = Black
G = Grey

WECO Component Type

The standard Video Patch bay for RGB, RGBS and RGBHV, with 75-ohm high-frequency jacks and a BNC rear interface.

Features

- 30,000 minimum insertion cycles
- True 75 Ohm impedance with low return loss
- High-bandwidth performance up to 3GHz
- Jacks conform to SMPTE 259M and SMPTE 292M
- BNC rear interface
- Panels made from 3/16" solid aluminium
- Durable powder-coat finish
- Jacks are isolated from the panel
- Extra-wide designation strips
- The centre RGB circuit is offset to ensure correct patch
- cord insertion
- SVHS video can be patched using two patch points and a TCS-418 adaptor on the rear BNC interface
- 3-circuit, 4-circuit and 5-circuit patch cords are available for RGB, RGBS, and RGBHV

Options

- Composite video jack count may be specified as one or two rows of 24, 26 or 28
- For higher density some component video patch bays come in a vertical configuration
- Available in 1, 1.5 or 2 rack units (RU)
- Black or gray front panel
- Jacks may be ordered in four different configurations:
  Normalled / Terminated
  Normalled / Non-Terminated
  Non-Normalled / Terminated
  Non-Normalled / Non-Terminated

BLACK 2x8 RGB CIRCUITS 2RU

Part Number Matrix

B RGB 16 T - 2 W N

Jack Termination
N = Non-Terminating
T = Terminating

Jack Standard
W = Weco

Jack Type
2 = Normalling
1 = Non-Normalling

Panel Height
S = 1RU
T = 2RU

Number of Circuits
5 = 1x5 RGBHV (1RU Only)
6 = 1x6 RGBS (1RU Only)
8 = 1x8 RGB (1RU Only)
10 = 2x10 RGBHV
12 = 2 x 6 RGBS
16 = 2x8 RGB
20 = 2x10 RGB, RGBS

Type of Panel
RGB
RGBS
RGBHV

Color Choice
B = Black
G = Grey

Mini - WECO High Bandwidth Composite Type

High-density Video Patch bay, featuring 32 jacks per row, with 75-ohm high-frequency jacks and a BNC rear interface.

Features

- 30,000 minimum insertion cycles
- True 75ohm impedance with low return loss
- High-bandwidth performance up to 3GHz
- Jacks conform to SMPTE 259M and SMPTE 292M
- BNC rear interface
- Panels made from 3/16" solid aluminium
- Durable powder-coat finish
- Jacks are isolated from the panel
- Extra-wide designation strips
- SVHS video can be patched using two patch points and a TCS-418 adaptor on the rear BNC interface

Options

- Composite video jack count may be specified as one or two rows of 32
- Available in 1, 1.5 or 2 rack units (RU)
- Black or gray front panel
- Jacks may be ordered in four different configurations:
  - Normalled / Terminated
  - Normalled / Non-Terminated
  - Non-Normalled / Terminated
  - Non-Normalled / Non-Terminated

Part Number Matrix

B 64 T - 2 MW N HD

Bandwidth
HD = High Definition (3GHz)
Jack Termination
N = Non-Terminating
T = Terminating
Jack Standard
MW = Mini-Weco
Jack Type
2 = Normalling
1 = Non-Normalling
Panel Height
S = 1RU
H = 1.5RU
T = 2RU
Quantity of Patch Ports
32 = 1x32 (1RU Only)
64 = 2x32
Color Choice
B = Black
G = Grey

BLACK 2x32 1.5RU

Mini - WECO Component Type

A smaller-format, high-density version of the Video Patch bay for RGB, RGBS and RGBHV, featuring 32 jacks per row, with 75-ohm high-frequency jacks and a BNC rear interface

Features

- 30,000 minimum insertion cycles
- True 75 Ohm impedance with low return loss
- High-bandwidth performance up to 3GHz
- Jacks conform to SMPTE 259M and SMPTE 292M
- BNC rear interface
- Panels made from 3/16" solid aluminium
- Durable powder-coat finish
- Jacks are isolated from the panel
- Extra-wide designation strips
- The centre RGB circuit is offset to ensure correct patch cord insertion
- SVHS video can be patched using two patch points and a TCS-418 adaptor on the rear BNC interface
- 3-circuit, 4-circuit and 5-circuit patch cords are available for RGB, RGBS, and RGBHV

Options

- Composite video jack count may be specified as one or two rows of 24, 26 or 28
- For higher density some component video patch bays come in a vertical configuration
- Available in 1, 1.5 or 2 rack units (RU)
- Black or gray front panel
- Jacks may be ordered in four different configurations:
  - Normalled / Terminated
  - Normalled / Non-Terminated
  - Non-Normalled / Terminated
  - Non-Normalled / Non-Terminated

Part Number Matrix

B RGB 20 T - 2 M N

Jack Termination
N = Non-Terminating
T = Terminating
Jack Standard
M = Mini-Weco
Jack Type
2 = Normalling
1 = Non-Normalling
Panel Height
S = 1RU
T = 2RU
Number of Circuits
6 = 1x6 RGBHV (1RU Only)
8 = 1x8 RGBS (1RU Only)
10 = 1x10 RG3 (1RU Only)
12 = 2x6 RGBHV
16 = 2x8 RGBS
20 = 2x10 RG3, RGBS, RGBHV
Type of Panel
RGB
RGBS
RGBHV
Color Choice
B = Black
G = Grey

BLACK 1x10 RGB CIRCUITS 1RU

BLACK 2x8 RGBS CIRCUITS 2RU

BLACK 2x10 RGB CIRCUITS 2RU

CLEAR 2x10 RGBHV CIRCUITS 2RU (CLEAR ANODIZED ALUMINUM BY SPECIAL ORDER ONLY)

Data Patch Bays

Bittree serial data patching systems are expressly designed to meet the needs of RS-422 serial data patching, such as the kind typically required in TV broadcast pr postproduction facilities. Bittree produces three models of Data Patch bays — RS422, RS422+1, and RS422+2 (GPI)

RS422

Standard, four-wire serial data patch bay.

RS422+1

Designed for five-wire patching, such as for remote control delegation for some Sony and Lynx systems.

RS422+2 (GPI)

Capable of handling four- and five-wire serial data patching, but specially designed for six-wire, general-purpose interface patching.

All Bittree data patching systems are held to strict electrical and mechanical specifications to guarantee exceptional performance in traditional serial data applications. Ideal for edit system to VTR patching; remote control delegation (e.g., Sony and Lynx systems); computer data interconnection, control panel re-routing; and central distribution of 422 signals.

Features

- Jacks rated to 30,000 minimum insertion cycles
- Copper-nickel-silver alloy leaf springs with gold-plated cross bar switching contacts and nickel-plated
- Sleeve bushings
- Precision-stamped reinforced steel jack frame
- Handles data rates up to 1Mb/s
- Handles bi-directional signals such as SMPTE 207M, RS-422 or RS-232
- DB9 female rear interface

Options

- 2x6 and 2x12 available in 1RU; 2x12, 2x18 and 2x24 available in 2RU
- Black or gray front panel
- 12″ or 7″ deep chassis
- Normal or non-normal I/O paired ports
- RS422 (four wire), RS422+1 (five wire) or RS422+2 (GPI) (six wire)

Part Number Matrix

B 422 - N4 T / 24

Number of Circuits
6 = 2x6
12 = 2x12
18 = 2x18
24 = 2x24

Panel Height
S = 1RU
T = 2RU

Number of Switched Normals
NN = 4 Circuits Non-Normal (RS422)
N4 = 4 Circuits (RS422)
N5 = 5 Circuits (RS422 + 1)
N6 = 6 Circuits (RS422 + 2) (GPI)

Type
422 = RS422 Patching
GPI = General Purpose Interface

Color Choice
B = Black
G = Grey

BLACK2X18 2RU

ACCESSORIES

Madison Technologies offers a wide variety of accessories, including tools, adaptors, connectors, jumpers and lacing bars as listed below.

Tools

Part Number	Description
K2MA-01	Crimp Tools for EPin
06-1877-04	Extraction Tool for EPin
06-1742-04	Insertion Tool for EPin
PT1	Punchdown Tools for ID Pins
RT1S	BNC Extraction Tool, 6″
RT1L	BNC Extraction Tool, 12″
RT1XL	BNC Extraction Tools, 22″
RTMW1L	BNC Extraction Tool, 12″ (Mini-WECO)

RTIL

06-1877-04

06-1742-04

Adaptors

Part Number	Description
AD1W	BNC to WECO Patch
ADMW12	BNC to Mini-WECO Patch
TCS-418	SVHS to two BNCs

AD1W

ADMW12

Connectors

Part Number	Description
E3M	Male 3 Pin Connector
E90MS	Male w/Screw 90 Pin Connector
E90HOOD	90 Pin Hood
EPIN	Pin (Crimp type)
K51002	Punchdown Housing (Red)
K51099	Punchdown Housing (White)
K51000	Punchdown Housing (Black)
K514	Punchdown Contact

E3M EPIN

Punchdown Housing

Jumpers

NORMAL-2E	Two-Wire E3 Normal Jumper (Isolated Ground)
NORMAL-3E	Three-Wire E3 Normal Jumper (Looped Ground)
NORMAL-48	48-Wire Normal Jumper
382811-2	Programmable Series Shunts (Red)
382811-9	Programmable Seires Shunts (White)

Lacing Bars

LB-17500	6" Deep Lacing Bar
LB175-3	3" Deep Lacing Bar
LB-1900	19" Wide Rack-Rail Lacing Bar

Patch Cords

Audio Bantam (TT) - Patch Cords

Colour	24in (61cm)	36in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	BPC2400-110	BPC3600-110	BPC4800-110	BPC6000-110	BPC7200-110
Red	BPC2402-110	BPC3602-110	BPC4802-110	BPC6002-110	BPC7202-110
Yellow	BPC2404-110	BPC3604-110	BPC4804-110	BPC6004-110	BPC7204-110
Green	BPC2405-110	BPC3605-110	BPC4805-110	BPC6005-110	BPC7205-110
Blue	BPC2406-110	BPC3606-110	BPC4806-110	BPC6006-110	BPC7206-110
Purple	BPC2407-110	BPC3607-110	BPC4807-110	BPC6007-110	BPC7207-110

Dual Bantam (TT) - Patch Cords

Colour	24in (61cm)	36in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	DPC2400	DPC3600	DPC4800	DPC6000	DPC7200
Red	DPC2402	DPC3602	DPC4802	DPC6002	DPC7202
Yellow	DPC2404	DPC3604	DPC4804	DPC6004	DPC7204
Green	DPC2405	DPC3605	DPC4805	DPC6005	DPC7205
Blue	DPC2406	DPC3606	DPC4806	DPC6006	DPC7206
Purple	DPC2407	DPC3607	DPC4807	DPC6007	DPC7207

Long Frame (1/4") - Patch Cords

Colour	24in (61cm)	36in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	LPC2400- 110	LPC3600-110	LPC4800-110	LPC6000-110	LPC7200-110
Red	LPC2402-110	LPC3602-110	LPC4802-110	LPC6002-110	LPC7202-110
Yellow	LPC2404-110	LPC3604-110	LPC4804-110	LPC6004-110	LPC7204- 110
Green	LPC2405-110	LPC3605-110	LPC4805-110	LPC6005-110	LPC7205-110
Blue	LPC2406-110	LPC3606-110	LPC4806-110	LPC6006-110	LPC7206-110
Purple	LPC2407-110	LPC3607-110	LPC4807-110	LPC6007-110	LPC7207-110

Used for 969 Series, 968, 961 Series

Used for 961 Series

Used for 489, 488, 481/521 Series

Component Video and Composite Video WECO and Mini WECO Patch Cables

Bittree offers a wide variety of patch cords, adaptors, and looping plugs in WECO and Mini-WECO jack types.

Weco Looping Cords

Colour	Part Number
Black	LP 75 00
Red	LP 75 02
Yellow	LP 75 04
Green	LP 75 05
Blue	LP 75 06
Gray	LP 75 08

Weco Patch Cords

Colour	24in (61cm)	36in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	VPC2400-75	VPC3600-75	VPC4800-75	VPC6000-75	VPC7200-75
Red	VPC2402-75	VPC3602-75	VPC4802-75	VPC6002-75	VPC7202-75
Yellow	VPC2404-75	VPC3604-75	VPC4804-75	VPC6004-75	VPC7204-75
Green	VPC2405-75	VPC3605-75	VPC4805-75	VPC6005-75	VPC7205-75
Blue	VPC2406-75	VPC3606-75	VPC4806-75	VPC6006-75	VPC7206-75
Purple	VPC2407-75	VPC3607-75	VPC4807-75	VPC6007-75	VPC7207-75

Weco Component Patch Cords

Colour	24in (61cm)	36in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	CPC2400-75	CPC3600-75	CPC4800-75	CPC6000-75	CPC7200-75

Weco Mini-Weco

Mini-Weco Looping Plugs

Colour	Part Number
Blue	LPM 75 06

Plugs

Cords

Mini-Weco Component Patch Cords

Colour	24in (61cm)	36 in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	CPCM2400-75	CPCM3600-75	CPCM4800-75	CPCM6000-75	CPCM7200-75

Mini-Weco Patch Cords

Colour	24in (61cm)	36 in (92cm)	48in (122cm)	60in (153cm)	72in (184cm)
Black	VPCM2400-75	VPCM3600-75	VPCM4800-75	VPCM6000-75	VPCM7200-75
Red	VPCM2402-75	VPCM3602-75	VPCM4802-75	VPCM6002-75	VPCM7202-75
Yellow	VPCM2404-75	VPCM3604-75	VPCM4804-75	VPCM6004-75	VPCM7204-75
Green	VPCM2405-75	VPCM3605-75	VPCM4805-75	VPCM6005-75	VPCM7205-75
Blue	VPCM2406-75	VPCM3606-75	VPCM4806-75	VPCM6006-75	VPCM7206-75
Purpe	VPCM2407-75	VPCM3607-75	VPCM4807-75	VPCM6007-75	VPCM7207-75

Video Distribution, Switching, Scan Conversion and Control Products

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Splitters, Distribution Amplifiers, Switchers & Extenders

High Resolution PC (VGA) Video

Splitters

Part Number	Description	
200-U	Dual (1 x 2) VGA Splitter. Supports 1600x1200. Can Drive Cables to 150 feet	
400-U	Quad (1 x 4) VGA Splitter. Supports 1600x1200. Can Drive Cables to 150 feet	
800-U	Octal (1 x 8) VGA Splitter. Supports 1600x1200. Can Drive Cables to 150 feet. Includes power adapter and input cable.	

Special-Purpose Video

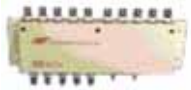
Splitters

Part Number	Description	
400 DX-U	Quad VGA Splitter. Supports 1600x1200. Adjustable drive on 2 outputs to 600 ft	
800-DX-U	Octal Splitter. Supports 1600x1200. Adjustable drive on 2 outputs to 600 ft	
CSV-3-U	Composite and S-Video Dual 1 in x 3 out Video Splitter	

Splitters/Switchers

Part Number	Description	
CP200-U	2 Channel Component Video Splitter/Switcher. Supports RGB or YPbPr signals including HDTV formats. Can act as a 1 in x 2 out splitter or 2 in x 1 out switcher. 3 BNC connectors for each channel. BNC-to-RCA adaptors supplied.	

Distribution Amplifiers

Part Number	Description	
210-LP-U	RGBHV Video Distribution Amp (1x2), 5 BNC's for each channel. Can generate Composite Sync or Sync-on-Green	
1800-RA-U	18-Channel (1x18) VGA Video Distribution Amp with Drive Compensation to 300 ft on 16 of the 18 outputs	
PT-102VN	1:2 Composite Video Distribution Amplifier Input: 1 video, 1Vpp/75Ω on a BNC connector Outputs: 2 video, 1Vpp/75Ω on BNC connectors High Bandwidth: 430MHz	
PT-102S	1:2 S-Video Distribution Amplifier Input: 1 s-video, 1Vpp/75Ω (Y), 0.3Vpp/75Ω (C) on a 4p connector Outputs: 2 s-video, 1Vpp/75Ω (Y), 0.3Vpp/75Ω (C) on a 4p connector Bandwidth (Y): 150MHz	

Distribution Amplifiers (cont.)

Part Number	Description	
VP-200N	High Resolution XGA Distribution Amplifier Input: 1 analogue red, green, blue signals- 0.7Vpp/75Ω, H & V sync, TTL level, on HD15F connectors Outputs: 2 analogue red, green, blue signals- 0.7Vpp/75Ω, H & V sync, TTL level, on HD15F High Bandwidth: 400MHz	
VP-200NAK	2:1 VGA DA with Audio For computer graphics video signals with resolutions ranging from VGA through UXGA and higher, and stereo audio signals. It takes a computer graphics video and an unbalanced stereo audio input and outputs simultaneously two computer graphics video signals, two balanced, and two unbalanced stereo audio signals.	
VP-111	XGA Line Driver Input: 1 x VGA/UXGA on an HD15F connector Outputs: 1 x VGA/UXGA, 1 x VGA/UXGA loop on HD15F connectors High Bandwidth: 470MHz	
105VB	1:5 Video Distribution Amplifier Input: 1 video, 1Vpp/75Ω on a BNC connector Outputs: 5 video, 1Vpp/75Ω on a BNC connector Bandwidth: 280MHz	

HDMI Splitters & Extenders

Part Number	Description	
SP-HDMI-2A-U	2-port HDMI Video Splitter/Extender. Supports HDTV resolutions to 1080p or PC resolutions to UXGA. Outputs can drive up to 40 feet. Includes 9v universal power supply with set of interchangeable connector plugs for use worldwide.	
SP-HDMI-4A	4-port HDMI Video Splitter/Extender. Supports HDTVresolutions to 1080p or PC resolutions to UXGA. Outputs can drive up to 40 feet. Includes 5v universal power supply with set of interchangeable connector plugs for use worldwide.	
EX-HDMI-2A-U	HDMI Cable Extender & Equalizer. Automatically boosts the signal to allow 65 feet of cable on its input and 65 ft on its output. Includes 5v universal power supply with set of interchangeable connector plugs for use worldwide.	
AV961G	HDMI Extender over 2 x CAT5, 5E or 6 Cables Excellent HD signal transmission with surround sound along with a high resolution picture. Signal transmission distances up to 60m for 1080i or 40 m in 1080p HDMI format.	
UH-2C-U	HDMI Re-Clocking Extender. Extends HDMI to 300ft (1080i) or 200ft (1080p) on 2 Cat6 cables. Supports HDMI versions 1.2 and 1.3. Re-clocks and regenerates the HDMI signal at the remote end, thereby allowing daisy-chaining.	

HDMI Switch

Part Number	Description	
SW-HDMI-3A-U	3 input x 1 output HDMI Video Switch. Switches and boosts signal. Can Drive cables to 50 feet. Includes IR Remote Control.Includes 5v universal power supply with set of interchangeable connector plugs.	

Digital Visual Interface

Splitters / Extenders

DVI Video Splitter/Extender, supports DVI-I inputs allowing connection of DVI-I PC to DVI-D or DVI-A (legacy VGA) displays. Extends DVI signals to 33 feet.

Part Number	Description
SP-DVI-2A-U	2-port
SP-DVI-4A-U	4-port

Digital Visual Interface (cont.)

Transmit error free DVI signals to 100 feet away.

Part Number	Description	
EX-DVI-2A-U	DVI Cable Extender & Equalizer. Automatically boosts the signal to allow 50 feet of cable on its input and 50 ft on its output. Includes Universal Power Supply.	

Switchers

DVI-I Video Switcher supports DVI-I signals to 1280 x 1024. Front panel control plus auto switch to active input.

Part Number	Description	
SW-DVI-2A-U	2 port	
SW-DVI-4A-U	4 port	

Part Number	Description	
DVS-2A-U	2 port DVI-I Video & Audio Switcher. Supports DVI-D signals to 1600 x 1200. Front panel, Auto, and Serial Port control & long cable equalization and drive capability Includes 6v universal power supply with set of interchangeable connector plugs.	
DVS-4A-U	4 port DVI-D Video & Audio Switcher. Supports DVI-D signals to 1600 x 1200. Front panel, Auto, and Serial Port control & long cable equalization and drive capability. Includes 6v universal power supply with set of interchangeable connector plugs.	

DVI / HDMI with Audio, RS-232 & Power Extension over CAT 6

Supports PC and HDTV resolutions to 1920x1400.

Part Number	Description	
UD2A-EDID-U	Uses only 2 Cat6 cables to extend AV, serial, and power to the remote unit. Supports lengths from 150 up to 300 ft depending on resolution. Can pass the EDID of the local port, remote port, or Learn, edit, and emulate EDID from any LCD. Receiver provides DVI-D, stereo audio and bidirectional RS-232 outputs. No power is required at the Receiver.	

Video+Audio over Category-5 UTP

Splitters

VGA+Audio to UTP (CAT5) Video Splitter Sender. Supports 1600x1200

Part Number	Description	
UVA-2-U	2-Channel	
UVA-4-U	4-Channel	
UVA-8-U	8-Channel	
UVA-24-U	24-Channel	
UVA-WP-U	VGA + Audio Sender on a single-gang Wallplate. Has one RJ45 output. Includes 1 gang (USA) wall mount bracket. Includes 1 gang (USA) wall mount bracket and a 6v universal power supply with set of interchangeable connector plugs for use worldwide.	
UVA-16X-U	Consolidate your installations 16 independent VGA + Audio over UTP senders in a single 2 RU enclosure. Provides 16 HD15 & 3.5 mm inputs and corresponding RJ45 outputs. Built-in Universal power supply with Standard IEC320 Jack. Power cord not included.	

Video+Audio over Category-5 UTP (cont.)

Extenders / Receivers / Correctors

Part Number	Description	
URA-U	UTP (CAT5) VGA +Audio Receiver with "long" cable compensation to 1000 ft	
URA-X2-U	UTP (CAT5) VGA +Audio Receiver with 2 identical VGA and Audio outputs. Acts as a combination URA & 2-channel A/V splitter.	
URA-RS232-U	UTP (CAT5) VGA +Audio Receiver with user programmable serial port. Sends ASCII commands to a display device based on a discrete input (contact closure or voltage level).	
SKU-RGB-U	Compact RGB Skew Corrector. VGA input and output HD15 connectors. Works with any video-on-UTP system (regardless of make or model)	

Video + RS-232 over Category-5 UTP Splitters and Extenders

Part Number	Description	
UV232-2-U	2-Channel VGA + RS-232 to UTP (CAT5) Video Splitter Sender. Supports 1600x1200.). Includes small 6v universal power supply with IEC-320 jack. Power cord not included.	
UV232-4-U	4-Channel VGA + RS-232 to UTP (CAT5) Video Splitter Sender. Supports 1600x1200. Local ports.). Includes small 6v universal power supply with IEC-320 jack. Power cord not included.	
UV232-8-U	8-Channel VGA + RS-232 to UTP (CAT5) Video Splitter Sender. Supports 1600x1200. Local ports. Includes small 6v universal power supply with IEC-320 jack. Power cord not included.	
UV232-24-U	24-Channel VGA + RS-232 to UTP (CAT5) Video Splitter Sender. Supports 1600x1200. Local Ports. . Built-in Universal power supply with Standard IEC320 Jack. Power cord not included.	
UV232-16X-U Consolidate	16 independent VGA + RS-232 over UTP senders in a single 2 RU enclosure. Provides 16 HD15 & 3.5 mm inputs and corresponding RJ45 outputs. Built-in universal power supply. Requires URA receivers. Built-in Universal power supply with Standard IEC320 Jack. Power cord not included	
UR232-U	UTP (CAT5) VGA + RS-232 Receiver with "long" cable compensation to 1000 ft. Includes small 6v universal power supply with IEC-320 jack. Power cord not included.	
UR232-X2-U	UTP (CAT5) VGA + RS-232 Receiver with 2 identical VGA and Audio outputs. Acts as a combination UR232 & 2-channel A/V splitter. Includes small 6v universal power supply with IEC-320 jack. Power cord not included.	

Mini-Cat® Extension over CAT5/5e/6 UTP Cable

Mini Cat® over CAT5

Part Number	Description	
UV1-U	"Mini-Cat ®" Kit (Sender & Receiver) Compact VGA over CAT5 converter/sender & receiver. Supports resolutions of 1600x1200 to 500 feet. Only one end requires power supply	
UV1-R	Mini-Cat ® VGA over CAT5 Receiver (remote) Works with UV1-SL, UV2-S, UV4-S and UV8-S.	
UV1-S-U	Mini-Cat ® VGA over CAT5 Sender (local)	
UV1-S-WP-U	Mini-Cat® VGA over CAT5 Sender (local) in a Single gang Wall Plate. Includes 1 gang (USA) wall mount bracket and a 9v universal power supply with set of interchangeable connector plugs for use worldwide.	
UV1-R-WP-U	Mini-Cat® VGA over CAT5 Receiver (remote) in a Single gang Wall Plate. Includes 1 gang (USA) wall mount bracket.	
UV1-SL-U	Mini-Cat ® VGA over CAT5 Sender (local) with Loop-Thru VGA Port for Local Monitor Connection. Includes a Universal power supply. Can power Receiver via Cat5.	
UVB1-CP-U	Kit for Extending Component Video. Component Video (YPbPr) over CAT5, sender and receiver. Supports all HDTV resolutions including 720p & 1080i/p. Drives Cat5 cables to 1000 feet. Includes input and output cables. Features Built-in Ground Loop Isolation.	
UVB1-CP-S-U	Active Balun with Ground Loop Isolation. Component Video (YPbPr) Active Balun Sender for SD/HDTV for up to 1000 ft and resolutions up to 1080p. Compatible with UVB1-CP-R and UV1-R-WP wallplate receivers. Includes power supply.	
UVB1-CP-R-U	Active Balun with Ground Loop Isolation. Component Video (YPbPr) Active Balun Receiver for SD/HDTV for up to 1000 ft and resolutions up to 1080p. Compatible with UV 1/2/8 –S or UV1-S-WP wallplate senders.	

VGA to CAT5 sender/splitter

Part Number	Description	
UV2-S-U	2-Channel VGA-to-CAT5 sender/splitter. Provides two RJ45 outputs plus a local VGA loop-thru. Comes with a universal power supply for the entire setup (can power 2 receivers via UTP)	
UV4-S-U	4-Channel VGA-to-CAT5 sender/splitter. Provides 4 RJ45 outputs plus a local VGA loop-thru. Comes with a universal power supply for the entire setup. (can power 4 receivers via UTP)	
UV8-S-U	8-Channel VGA-to-CAT5 sender/splitter. Provides 8 RJ45 outputs plus a local VGA loop-thru. Comes with a universal power supply for the entire setup. (can power 8 receivers via UTP)	
UV1-S-16X-U	Consolidate your installations. 16 independent VGA over UTP senders in a single 2 RU enclosure. Provides 16 HD15 inputs and corresponding RJ45 outputs. Powers all remote receivers via Cat5 cables. Requires UV1-R or UV1-R-WP receivers. Built-in Universal power supply with Standard IEC320 Jack. Power cord not included.	
UV24-S-U	24-Channel VGA-to-CAT5 sender/splitter. Provides 24 RJ45 outputs plus a local VGA loop-thru. Comes with a universal power supply and can power 24 receivers via UTP.	

Mini-Cat® Extension over CAT5/5e/6 UTP Cable (cont.)

Component Video over CAT5

Part Number	Description	
UV1-CP-U	Kit for Component Video YPbPr over CAT5, sender and receiver. Includes two cables. Supports all HDTV resolutions to 500 feet. Phantom power over Cat5 cable	

Composite Video and Audio over CAT5

Part Number	Description	
UV1-CV-U	Kit for Composite Video & Audio C.V. & Stereo Audio over Cat-5, sender and receiver. Includes two cables. Can extend signal to 2000 feet. Phantom power over Cat5 cable.	

VGA & VGA with audio over UTP

Computer Graphics Video over Twisted Pair Transmitter

Part Number	Description	
TP-121	XGA + Audio to CAT5 Line Transmitter. Twisted pair transmitter and receiver for computer graphics video, stereo and S/PDIF audio signals. Converts computer graphics video and unbalanced stereo audio inputs into a twisted pair signal.	
TP-122	CAT5 to XGA + Audio Line Receiver. Twisted pair transmitter and receiver for computer graphics video, stereo and S/PDIF audio signals. Converts the twisted pair signal back into a computer graphics video, unbalanced stereo and S/PDIF audio outputs.	
PT-110	XGA to CAT5 Line Transmitter. Converts a computer graphics signal into a twisted pair signal which is converted back to a computer graphics video signal when used in conjunction with other compatible Kramer receivers.	
PT-120	CAT5 to XGA Line Receiver. Converts a twisted pair signal from a PT-110 transmitter (or other compatible Kramer transmitter) to a computer graphics signal.	

USB over CAT5E

Part Number	Description	
UU-150	Mini-Cat ® USB-over-Cat5 Extender Extend any USB Device up to 150 feet away from your PC. Supports data transfer rates up to 12 MBPS	

Zero-Skew CAT5 Wire for use with Hall Research CAT5 Products

Part Number	Description
CUTP-Z-1000-BLK	Zero-Skew CAT5 cable for use with video CAT5 products, 305M, PVC

Video Extenders over Fibre Optics

Part Number	Description	
HR-722A-U	VGA To Fibre extender with Audio. Includes: Transmitter and Receiver both with HD 15 Female connectors and 3.5mm Stereo Audio Jack. Power Supplies included in package for both. Plug-and-Play, nothing to adjust.	

Video Switches and Matrix Switchers

VGA Switch

Part Number	Description	
VS-2-U	Compact VGA Switch, 2 VGA inputs with 1 output. Includes Push-button, Auto, and RS-232 control modes	
VS2-X2-U	Compact VGA Switch, 2 VGA inputs with Built-in Splitter for 2 identical VGA outputs.	
VS-2A-U	VGA Switch with Stereo Audio, 2 VGA & Audio inputs. Loop-out for Input #1 and Switched A/V output . Auto, Manual, and RS-232 control. Output can be blanked from front panel. Includes 6v universal power supply with set of interchangeable connector plugs for use worldwide.	
VS-4-U	4 in x 1 out VGA switch, with RS-232, front panel and auto-switching modes.	
VS-4A-U	4 in x 1 out VGA & Audio Switch, with RS-232, front panel and auto-switching modes. Includes 6v universal power supply with set of interchangeable connector plugs for use worldwide.	
VS-20-U	VGA Switch, 20 in x 1 out. Includes control keypad.	

S-Video Switch

Part Number	Description	
VS4-YC -U	4 in x 1 out S-Video (YC) switch, with front panel selector switch and RS-232 control	
VS4-YCA-U	4 in x 1 out S-Video (YC) and Stereo Audio switch, with front panel selector buttons and RS-232 control modes	

Splitter/Switcher

Part Number	Description	
CP200-U	2 Channel Component Video Splitter/Switcher. Can act as a 1 in x 2 out splitter or 2 in x 1 out switcher. 3 BNC connectors for each channel. Supplied with BNC-to-RCA adaptors for all connectors.	

Switch Matrix

Part Number	Description	
VSM-404-U	4 X 4 VGA Switch Matrix. Includes RS232 control keypad	
VSM-802B	8 X 2 VGA Switch Matrix, includes two control keypads	
VSM-1616-U	16 X 16 VGA Switch Matrix. HD 15 connectors for inputs & outputs. Built-in Universal power supply with Standard IEC320 Jack. Power cord not included.	

Switchers, Matrix Switchers & Controllers

Part Number	Description	
VP-4 X 4	4x4 VGA/XGA/Audio Matrix Switcher Input: 4 analogue red, green, blue signals – 0.7 Vpp/75Ω, H&V syncs, TTL level on HD15F connectors. 4 balanced audio stereo signals, +4dBm/33k typical, 21 Vpp max. on detachable terminal blocks. Outputs: 4 analogue red, green, blue signal – 0.7 Vpp/75Ω, H & V syncs, TTL level on HD15F connectors. 4 balanced audio stereo signals, + 4dBm/50Ω typical, 21 Vpp max. on detachable terminal blocks. High Bandwidth: 440MHz	

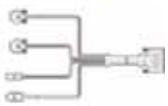
Video Switches and Matrix Switchers (cont.)

Part Number	Description	
VS-162AV	16 x 16 Audio Video Matrix Switcher Input: Video: 16 composite video, 1 Vpp/75Ω on BNC connectors. Audio: 16 balanced audio 10Ω on detachable terminal block connectors. Outputs: Video: 16 composite video 1Vpp/75Ω on BNC connectors. Audio: 16 balanced audio 50Ω on detachable terminal blocks. Bandwidth: 90MHz	
VP-32xIn	Electronic – 3 x 1:2 Computer Graphics Video & Balanced Stereo Audio Switcher Input: 3 VGA/UXGA on HD15F connectors. 3 balanced stereo audio 10Ω on 5 pin terminal block connectors. 1 detachable 4 pin terminal block connector for remote control. Outputs: 2 VGA/UXGA on HD15F connectors. 2 balanced stereo audio 50Ω on 5 pin terminal block connector. High Bandwidth: 450MHz	
VP-808xl	8x8 A/V Matrix Switcher Input: 3 VGA/UXGA on HD15F connectors. 3 balanced stereo audio 10Ω on 5 pin terminal block connectors. 1 detachable 4 pin terminal block connector for remote control. Outputs: 2 VGA/UXGA on HD15F connectors. 2 balanced stereo audio 50Ω on 5 pin terminal block connector. High Bandwidth: 450MHz	
VP-211DS	Automatic VGA/Audio Switcher Input: 2 VGA/UXGA on HD15F connectors. 2 unbalanced stereo audio on 3.5mm mini audio connectors. Outputs: 1 VGA/UXGA on HD15F connectors. 1 VGA/UXGA on an HD15F connector (input #1 loop). 1 unbalanced stereo audio on a 3.5mm mini audio connector.	

KVM Switches

Part Number	Description	
4-to-1 KM	Keyboard and Mouse Switch. Controls 4 PCs with 1 Keyboard and Mouse	
4-to-1 KVM	KVM Server Switch. Controls 4 PCs with 1 KVM KVM Switch with RS-232 Serial Port control - Stack 2 for 8 PCs or stack 3 for 12 PCs	
MC4-H2	Dual-Head Video & Serial Control. 4-Channel, Expandable, Dual-Video-Head	

KVM Switch Accessories

Part Number	Description	
MC- 4HRT	Small keypad that connects between keyboard and KVM Switch. Allows Remote PC Selection	
CMD6-2XMD6 (4-to-1KM Cable)	2-in-1 Cable To connect the 4-to-1 KM to PC's keyboard and mouse ports	
CW-KVM-06 (4-to1-KVM Cable)	3-in-1 Cable To connect the 4-to-1 KVM to PC's keyboard, video, and mouse ports	
CA10087-06 (MC4-H2 Cable)	One cable is required for each PC	
CA10087-10 (MC4-H2 Cable)	One cable is required for each PC	
CEXP-H2-1 (MC4-H2 Cable)	Expansion Cable Set Connects Multiple HC4-H2 dual head KVMS	
USB-2PS2	USB to 2 PS2 (KM) adapter	

Dual Station Interface

2 KVM stations control 1 PC

Part Number	Description	
97-S	Dual Station Interface For connecting 2 Monitors, 2 Keyboards, & 2 Serial Mice or 2 Serial Touch screens to 1 PC	
97-P	Dual Station Interface, for 2 Monitors, Keyboards, & PS/2 Mice from 1 PC	
RXP-VKM	Remote Receiver Box (connects to 97-P using CVGA-X cable)	

PS/2 Keyboard or Mouse 3-port "Hub"

Part Number	Description	
3KM	Triple Play - 2 or 3 Mice or Keyboards connect to one PC, (For PS2 Keyboard & mouse)	

KVM Extenders

For video keyboard, mouse, stereo and audio

Part Number	Description	
U97-A-U	KVM Extender over CAT5 with stereo audio. Includes: sender, receiver, and single power supply. Sender features local KVM & audio ports. Receiver can be up to 500 feet away	
U97-H2-U	Dual-head Video KVM Extension on Cat5 Cable with Local and Remote Ports. Local Station has 2 video, keyboard, mouse, and audio outputs. Remote station has 2 video, keyboard, mouse, Serial Port, and audio outputs. Requires only 2 Cat5 cables	

Video Processors, Scalers, Converters (digital <> analogue)

Part Number	Description	
TVB-400-U TVB-400A	Video Scaler / Switcher. Up and Down Converts all video inputs (up to 1600x1200 or 1080p) to SXGA or HDTV (up to 1080i) with Time-base correction. Inputs: Component Video, S-Video, CV, and VGA. Output: Various PC and HDTV resolutions. RS232 serial and IR remote controller (included) The TVB-400A offers audio to follow with volume control.	
TVB-350-U	Video Scaler/Up-Converter with Component Input. Converts NTSC/PAL to SXGA or HDTV Time-base correction. Inputs: Component Video, S-Video, CV, and VGA. Output: VGA (also HDTV modes). RS232 serial and IR remote controller (included)	
TVB200-Plus-U	NTSC/PAL video to VGA converter with audio. Four front panel input select buttons, video (Gamma) enhancement switch, audio volume levels for each input, RS-232 control	
CC-101-U	Closed Caption Decoder and Text Video Overlay With S-Video and Composite inputs and outputs. Text video overlay can be sent via RS-232 in live mode, or up to 10 messages can be stored in the unit and played back with user specified timing.	

Video Processors, Scalers, Converters (digital <> analogue) (cont.)

Part Number	Description	
CC-101-PRO-U	Closed Caption Decoder and Text Video Overlay With S-Video, Composite inputs and S-Video and Composite, Progressive Component (YPbPr) and VGA outputs. Text video overlay can be sent via RS-232 in live mode, or up to 10 messages can be stored in the unit and played back with user specified timing	
VHD-2-U	VGA-to-TV Scan Converter, with HDTV support. Handles input resolutions up to 1600 x 1200. Input: VGA to UXGA from PC. Outputs: Composite Video, S-Video, Component Video, VGA	
VHD-180 -U	Converts PC video or YPbPr (SD or HD) to CV, S-Vid, & YPbPr HDTV or VGA-to-TV Scan Converter, Input resolutions up to 1600 x 1200 for PC or 1080P for YPbPr. Both inputs have loop out. Converted outputs: Y/C, CV, and Component Video. Front panel, IR Remote, and RS-232 Control.	
SC-VGA-2-U	Scalable (Up/Down) Resolution and format Scan converter/Video processor. Can convert PC video to analog component HDTV output or vice-versa. Output can also be Horizontally Mirrored.	
SC-1080D-U	Converts PC video (VGA or DVI) or HDTV (HDMI or YPbPr) to VGA and DVI. VGA, HD Analog & DVI/HDMI Scaler with DVI and VGA simultaneous outputs. Includes Serial RS-232 Control, IR remote, built-in universal power supply. Front panel, IR, and RS-232 Control.	

Time-Base Corrector (TBC)

Part Number	Description	
TBC-100-U	Creates a clean video signal with perfect synchronization, video timing, colour encoding from an imperfect source. Also converts Composite to S-Video and vice-versa	

Video Processors, Scalers and VGA <> DVI Converters

Part Number	Description	
SC-VGA-2-U	VGA/HDTV Video Processor Scalable (Up/Down) Resolution and Mirroring Converter/Processor. Can convert VGA to HDTV or vice-versa. Turns any VGA switch into a seamless switcher.	
SC-DV-2-U	DVI to VGA or YPbPr Converter and Scaler. Converts digital DVI output from PC or other device to VGA or YPbPr component output. Output resolution is programmable. Input resolution is automatically detected and scaled.	
SC-VD-2-U	YPbPr or VGA to DVI Converter and Scaler. Converts analog VGA from PC or Component Video from A/V equipment to digital DVI output with scalable resolution. Output can be set to any PC or HDTV resolution.	
VP-413	Video to Computer Graphics Digital Scaler. The VP-413 a high performance digital scalers for composite video and s-video (Y/C) signals. It will scale a video signal to a selectable computer graphics video on a HD-15 connector.	
VP-719xl	Proscale Presentation Switcher/Scaler. The VP-719xl is a 7-input scaler/switcher with unbalanced stereo audio. It scales any composite, s-video (Y/C), component video (YUV), DVI Video or computer graphics signal up or down to a selectable graphics output resolution and provides glitch-free switching between sources through FTB (fade-thru-black) switching technology.	

Test Pattern, Colour Bar, Black Burst and Audio Generators

Part Number	Description	
DVC-3-U	Digital Video Coach 3. PC/HDTV Video Test Pattern Generator with DVI, VGA and Component (Y, Pb, Pr) Outputs.	
810	Video Colour Bar/Audio Generator. The 810 is high performance composite video and s-video (Y/C) colour bar and 1kHz audio tone generator. It outputs two composite video and one s-video colour bar signal in either NTSC or PAL, and 1kHz audio tone simultaneously.	
810B	Black Burst/Audio Generator. The 810B is a high performance black burst and 1 kHz audio tone generator. It outputs two composite and one s-video (Y/C) black burst signals in NTSC or PAL formats and 1 kHz audio tone simultaneously.	

Courtroom Automation & Video Distribution Products - HallVision™

Part Number	Description	
CVA-2000	Audio Video Switcher 3 VGA inputs 6 outputs	
KP-3	HallVision Keypad / Status Indicator	

Computer Training Classroom Audio/Video Distribution System

Part Number	Description	
M1-TM Mirrors-One™	Teacher's Module. One needed in each classroom setup. Provides pass through for Teacher's Monitor and two Daisy-Chain outputs for Students	
M1-SM Mirrors-One™	Student Module Each Student Station requires one. Used to Switch each Student Station to the image on the Instructor's PC	

Note: Daisy Chain cables to interconnect teacher and student units are not included.

USB Solutions

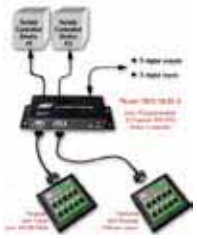
Part Number	Description	
UU-150	Mini-Cat®-USB-over-Cat5 Extender Extend any USB Device up to 150 feet away from your PC using UTP cables. No power supply is needed. PnP installation. Just plug the sender in your PC's USB port and plug a Cat5 cable between the sender and the receiver. Supports data transfer rates up to 12 MBPS	
UU-2x4-E	Extends 2 USB Ports to 350 feet Dual-Channel USB-over-Cat5 Extender Send 2 independent USB ports from a PC on a Single Cat5 Cable to a receiver that features Dual 4 port Hubs for total of 8 USB ports at the remote station 350 feet away. Comes with two A/B 6 ft cables for connection to PC and rack-mount kit for the Sender unit.	

USB Solutions (cont.)

Part Number	Description	
USB-RS232-1	USB to RS-232 Serial Converter	
USB-EXT-16	USB 2.0 Active Extension Cable, 16 feet	
USB-2PS2	USB to PS/2 Mouse and Keyboard Simulator/Converter	

RS-232 Serial Control Equipment

Phoenix - User Programmable Multi-Target Serial Control System

Part Number	Description	
SER-HUB-C1-E	Phoenix Serial Control System.	
KP-2B-HUB	Includes one keypad 10-button User Keypad for the Phoenix. Has 10 programmable buttons and LEDs. Up to 2 can connect to the HUB. Can be located up to 500 feet from hub. Extra Keypad	
340-AT4060JB-CL	Customizable Keycap. Replaces the standard keycap that the KP-2B-Hub comes with. Allows user to insert printed text under clear bezel. Custom Cap	

Advanced Serial Projector Controller

Part Number	Description	
VSA-31-U	A/V Switch-Cat™. 3 input A/V Switcher on a wallplate. Accepts 2 VGA and 1 TV-Video with audio. Sends selected AV to the Projector via 2 Cat5 Cables. No power supply is needed for the wallplate. Remote unit (included) can be up to 750 ft away. and has built-in 12 Watt Stereo Amp (6W per channel). Controls projector operation (on/off and source selection) via serial commands. Includes 4 gang (USA) wall mount bracket. Includes 1 gang (USA) wall mount bracket and 12v universal power supply with IEC-C5 jack. Australian Power Cord provided.	
HR-3P-U	Advanced Projector Controller with built-in VGA Splitter. Has VGA, CV, and S-Video inputs and outputs. Senses and prioritizes the inputs and issues user programmable commands to the projector's RS-232 Serial port. Also features one discrete input which can be used to issue commands. Also senses no video to shut off the projector and activate a discrete output.	
VSA-31-SP-U (Black) VSA-31-SP-W -U (White)	3 input A/V Switcher with projector control, audio amplifier, and microphone input. Kit includes receiver, wall-mount connector panel, and user interface keypad. Accepts 2 VGA and 1 TV-Video with audio. Sends selected AV to the Projector via 2 Cat5 Cables. Provides XLR connector for microphone input (both condenser and dynamic microphones are supported). Receiver unit (included) can be up to 750 ft away and has built-in 20 Watt Stereo Amp (10W per channel). Controls projector operation (on/off and source selection) via serial commands.	

Simple Programmable Serial Controller

Part Number	Description	
HR-1P-U	With one discrete input that senses a voltage level (or contact closure), it can send user programmable strings via serial port to any device.	
HR-16P	16-input Programmable Serial Device. Includes an external DC power supply, 6ft. serial cable for programming, Windows User Interface Software, user manual. Includes a 5v universal power supply with set of interchangeable connector plugs for use worldwide.	

Cables and Accessories

HDMI Cables

High definition multimedia interface cables

Part Number	Description	Length
RWCAHDMIM1.5	HDMI Male to Male, 19 Pin	1.5m
RWCAHDMIM3.0	HDMI Male to Male, 19 Pin	3m
RWCAHDMIM5.0	HDMI Male to Male, 19 Pin	5m
RWCAHDMIM10.0	HDMI Male to Male, 19 Pin	10.0m

HD15 to HD15

Length	Male to Female	Male to Male
2m	RWCAHD15MHD15F2.0G	RWCAHD15MHD15M2.0G
3m	RWCAHD15MHD15F3.0G	RWCAHD15MHD15M3.0G
5m	RWCAHD15MHD15F5.0G	RWCAHD15MHD15M5.0G
10m	RWCAHD15MHD15F10.0G	RWCAHD15MHD15M10.0G
15m	RWCAHD15MHD15F15.0G	RWCAHD15MHD15M15.0G
20m	RWCAHD15MHD15F20.0G	RWCAHD15MHD15M20.0G

HD15 Male to BNC

Part Number	Description	Length
RWCAHD15FBNCF0.2G	HD15 Female to BNC Jacks	0.2m
RWCAHD15FBNCF0.3G	HD15 Female to BNC Jacks	0.3m
RWCAHD15MBNCF0.3G	HD15 Male to BNC Jacks	0.3m
RWCAHD15MBNCF0.9G	HD15 Male to BNC Jacks	0.9m
RWCAHD15MBNCF1.5G	HD15 Male to BNC Jacks	1.5m
RWCAHD15MBNCF3.0G	HD15 Male to BNC Jacks	3.0m
RWCAHD15MBNCM0.3G	HD15 Male to BNC plugs	0.3m
RWCAHD15MBNCM0.9G	HD15 Male to BNC plugs	0.9m
RWCAHD15MBNCM1.8G	HD15 Male to BNC plugs	1.8m
RWCAHD15MBNCM3.0G	HD15 Male to BNC plugs	3.0m
RWCAHD15MBNCM5.0G	HD15 Male to BNC plugs	5.0m

BNC Male to BNC Male (75 Ohm)

Finish	Analogue	Digital
Nickel	RWCABNCMBNCMXX-A-N	RWCABNCMBNCMXX-D-N

HD15 Male to 3 RCA Plugs

Part Number	Description
RWCAHD15MRCA35.0G	HD15 Male to 3 RCA Plugs, 5m, Gold

S-Video Cables

Mini Din 4 Plug to BNC & RCA types

Part Number	Description	Length
RWCAMD4BNCF20.2G	S-Video to 2 x BNC Jacks	0.2m
RWCAMD4BNCM20.2G	S-Video to 2 x BNC Plugs	0.2m
RWCAMD4BNCM1.8G	S-Video to 2 x BNC Plugs	1.8m
SVRCA	S-Video to 2 x RCA Jacks	0.2m

Note: Please call for other lengths

DVI Video Cables

Part Number	Description	Length
C-DVID-S-1M	DVI-D to DVI-D Single Link TMDS	1m
C-DVID-S-2M	2m DVI-D to DVI-D Single Link TMDS	2m
C-DVID-S-3M	3m DVI-D to DVI-D Single Link TMDS	3m
C-DVID-S-5M	5m DVI-D to DVI-D Single Link TMDS	5m
C-DVID-D-1M	DVI-D to DVI-D Dual Link TMDS	1m
C-DVID-D-2M	DVI-D to DVI-D Dual Link TMDS	2m
C-DVID-D-3M	DVI-D to DVI-D Dual Link TMDS	3m
C-DVID-D-5M	DVI-D to DVI-D Dual Link TMDS	5m
C-DVID-D-10M	DVI-D to DVI-D Dual Link TMDS	10m
C-DVI-VGA-1M	DVI to VGA Cable Assembly	1m
C-DVI-VGA-2M	DVI to VGA Cable Assembly	2m
C-DVI-VGA-3M	DVI to VGA Cable Assembly	3m
C-DVI-VGA-5M	DVI to VGA Cable Assembly	5m
GC-DVI-VGA	DVI-A to HD15 Female Adaptors	-

HDMI™ and DVI-to-HDMI Cables

Part Number	Description	Length
C-HDMI-2M	HDMI to HDMI Patch Cable	2m
C-HDMI-3M	HDMI to HDMI Patch Cable	3m
C-HDMI-5M	HDMI to HDMI Patch Cable	5m
C-HDMI-DVI-2M	HDMI to DVI Patch Cable	2m
C-HDMI-DVI-3M	HDMI to DVI Patch Cable	3m
C-HDMI-DVI-5M	HDMI to DVI Patch Cable	5m

HDMI™ Accessories

Part Number	Description
EX-HDMI-2A-U	HDMI Cable Extender & Equalizer. Automatically boosts the signal to allow 65 feet of cable on its input and 65 ft on its output. Includes power supply
SW-HDMI-3A	3 input x 1 output HDMI Video Switch. Electronically switches and boosts signal. Can Drive cables to 50 feet. Includes IR Remote Control.
VHD-HDMI	PC Video or Component Video to HDMI Converter with Audio. Allows connection of VGA signal from a PC or the YPbPr signal from a DVD player to connect to the HDMI input of a Plasma or LCD screen

HDMI™ is a registered trademark of HDMI Licensing LLC

Professional Microphone Systems

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Goosenecks

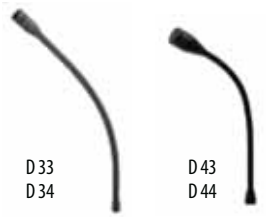
Dynamic Gooseneck

CLOCKAUDIO

Dynamic cardioid gooseneck microphones designed for speech purposes in a variety of pro sound applications. Rugged, quality brass construction for long life with choice of XLR or base mounting on various length of shaft, finished in Satin Black. Response optimised for speech.

Features

- Rugged all metal construction for long life
- Response optimised for speech
- Fully flexible or semi rigid shaft (D 33 / D 33E & D 34 / D 34E only)
- Termination XLR or base mounting
- Engineered in high quality brass
- Finished in satin black



Specifications

Part Numbers	D 33 / D 33E & D 34 / D 34E	D 43 / D 43E & D 44 / D 44E
Frequency Response	150Hz - 12KHz	150 Hz - 12 KHz
Type	Dynamic	Dynamic
Polar Pattern	Cardioid	Cardioid
Sensitivity	-63.5dB +/- 3dB @ 1KHz	60dB +/- 3dB at 1 KHz
Impedance	200 Ohms	200 Ohms
Head diameter	20	22
Gooseneck diameter	10	8

Ordering

Part Number	Length	Mount/Termination
D 33	300	M10 x 1 Thread with shakeproof washer and nut
D 34	425	M10 x 1 Thread with shakeproof washer and nut
D 33E	300	Male 3 Pin XLR
D 34E	425	Male 3 Pin XLR
D 43	300	M10 x 1 Thread with shakeproof washer and nut
D 44	400	M10 x 1 Thread with shakeproof washer and nut
D 43E	300	Male 3 Pin XLR
D 44E	400	Male 3 Pin XLR
D5 (Stub Microphone)	56	XLR

Condenser Goosenecks

C3 Series

Cardioid condenser microphones designed for use in conference halls, places of worship, broadcasting and paging systems. Manufactured in high quality brass and finished in Satin Black. 3 pin XLR or base mounting. Response is optimised for consistent sound quality. Halo versions are designed specifically to use in conference systems or other applications where speaker identification is required, with Halo of high bright LED's and termination in a 5 pin XLR or base mounting. The slimline goosenecks are available as fully flexible or semi rigid shafts of various lengths. The knuckle mounted versions allow both horizontal rotation and vertical angle adjustments.

Features

- Response optimised for consistent sound quality
- Unobtrusive slimline design
- Superior grade components
- Choice of XLR or open ended base mounting
- High bright LED's
- Engineered in high quality brass
- Finished in satin black
- Fully flexible or semi rigid gooseneck shaft
- Choice of shaft length
- C301/C301E fitted with knuckle joint giving both horizontal rotation and vertical angle adjustment

Goosenecks (cont.)

Specifications

CLOCKAUDIO

Type		Condenser (back electret)
Polar Pattern		Cardioid
Frequency Response		50Hz -18KHz
Sensitivity		-47dB +/-3dB at 1 KHz (0dB = 1V/Pa)
Impedance		"E"Type 200 Ohms Open ended 1.6K Ohms
Power Requirements		"E"Type 9-48v phantom power Open ended 1.5-9v max through series resistor
Switchable Bass Filter & -10dB switchable Pad		"E"Type
S/N ratio		64dB(A)
Termination	Open ended "E"Type Halo	M10 x 1 Thread with shakeproof washer & nut Male 3 pin XLR Male 5 pin XLR
Halo High Bright LED's		operating voltage = 3.6 volts operating current = 30mA max.

Ordering C3 Series

Part Number	Length (mm)	Mount/ Termination	Shaft Diameter (mm)
C 31	100	M10 Stud	8.0
C 32	200	M10 Stud	8.0
C 33	300	M10 Stud	8.0
C 34	400	M10 Stud	8.0
C 35	500	M10 Stud	8.5
C 36	600	M10 Stud	8.5
C 31E	180	XLR	8.0
C 32E	280	XLR	8.0
C 33E	380	XLR	8.0
C 34E	480	XLR	8.0
C 35E	580	XLR	8.5
C 36E	680	XLR	8.5
C 301E	180	XLR	12
C 3100 (Mini Gooseneck)	100	3 Pin F / Tini Q	6

Ordering Halo Goosenecks

C 33 HALO	300	M10 Stud	8.0
C 34 HALO	400	M10 Stud	8.0
C 33E HALO	380	XLR	8.0
C 34E HALO	480	XLR	8.0
C301E HALO (Knuckle Joint)	180	XLR	12

Mini Shotgun Microphones

C800 Series

Developed for speech purposes in a wide range of pro and live sound applications including places of worship, conference and leisure centres, banks and financial trading centres.

Features

- Slim mini shotgun
- Optimised for speech clarity
- Superior grade components
- Unobtrusive slimline design
- Engineered in high quality brass
- Finished in satin black
- Fitted with a knuckle joint giving both lateral and vertical movement (C 801 and C 801E only)

Goosenecks (cont.)

Specifications

CLOCKAUDIO

Part Number	C 800E / C 801E	C 800 / C 801
Type	Condenser (back electret)	Condenser (back electret)
Polar Pattern	Hypercardioid	Hypercardioid
Frequency Response	50 Hz - 18 KHz	50 Hz - 18 KHz
Sensitivity (0dB = 1 V/Pa)	- 47dB +/- 3dB at 1 KHz	- 47dB +/- 3dB at 1 KHz
Impedance	200 Ohms	1.8 K Ohms
S/N Ratio	64dB(A)	64dB(A)
Maximum SPL	125dB 1% THD	125dB 1% THD
Power Requirements	9 - 48 Volts Phantom Power	1.5 - 9 Volts max. through series resistor
Optimum Operating Voltage	-	6 Volts
Switchable Bass Filter	- 4dB per octave at 400 Hz to - 6dB per octave at 100 Hz	-
Switchable Pad-10dB	-10dB	-
Cable		2 Metres
Diameter	12mm	12mm

Ordering

Part Number	Length	Mount/Termination
C 800E	458mm or 480mm with W8 windshield	XLR
C 801E	262mm or 285mm with W8 windshield	XLR
C 800	375mm or 397mm with W8 windshield	M10 Stud
C 801	150mm or 172mm with W8 windshield	M10 Stud

Twin Mount Condensers

C420E

CLOCKAUDIO

Individually powered providing live redundant capability so often required in a live broadcast situation.

Specifications

Frequency Response	50 Hz - 18 KHz
Sensitivity	-44dB +/- 3dB @ 1KHz (0dB = 1V/Pa)
Impedance	200 Ohms
S/N Ratio	64dB(A)
Power Requirements	9.48 volts Phantom Power
Termination	Male 5 pin XLR

Ordering

Part Number	Length (mm)	Mount / Termination
C 420E	220	5 Pin XLR

C440E

Cardioid Condenser Microphones mounted on twin rigid shafts each vertically adjustable through 180+ degrees. Designed for use in a wide range of applications including presentations, conferences, broadcasting and places of worship.

Features

- Attractive slimline design
- Optimised for consistent sound quality
- Shaft angles independently adjustable
- XLR mounting
- Engineered in high quality brass
- Finished in satin black

Twin Mount Condensers (cont.)

Specifications

CLOCKAUDIO

Type	Condenser (back electret)
Polar Pattern	Cardioid
Frequency Response	50 Hz - 18 KHz
Sensitivity	-44dB +/- 3dB at 1KHz (0dB = 1V/Pa)
Impedance	200 Ohms
S/N Ratio	64dB(A)
Maximum SPL	125dB 1% THD
Power Requirements	9 - 48 volts Phantom Power
Switchable Bass Filter	-4dB per octave at 400Hz to -6dB per octave at 100Hz
Switchable Pad	-10dB
Termination	Male 3 pin XLR

Ordering

Part Number	Length (mm)	Mount / Termination
C 440E	336	XLR

C430E

Individually powered providing live redundant capability so often required in a live broadcast situation. Fitted with Tini Q connector and fully flexible top section to each arm giving the option of selecting three microphone head variants from the 900 series ie C900, C800H or C3H

Specifications

Frequency Response	50 Hz - 18 KHz
Sensitivity	-44dB +/- 3dB @ 1KHz (0dB = 1V/Pa)
Impedance	200 Ohms
S/N Ratio	64dB(A)
Power Requirements	9.48 volts Phantom Power
Termination	Male 5 pin XLR

Ordering

Part Number	Length (mm)	Mount / Termination
C 430E	220	3 Pin F/Fini Q - 5 Pin XLR

Suspended & Ceiling Mounted

Suspended Mini Shotgun Microphone - C8SE Series

CLOCKAUDIO

Mini shotgun hypercardioid condenser microphone designed to be suspended in places of worship, conference halls, theatres etc.

Features

- Consistent high quality sound
- Slimline design
- Engineered in high quality brass
- Strong lightweight cable
- Short flexible shaft
- Knuckle for easy adjustment of vertical angle
- Finished in satin black or white
- Ceiling mount available as optional extra

Suspended & Ceiling Mounted (cont.)

Specifications

CLOCKAUDIO

Frequency Response	50 Hz - 18 KHz
Sensitivity	-47dB +/- 3dB at 1 KHz (0dB = 1 V/Pa)
Impedance	200 Ohms
S/N Ratio	64dB(A)
Maximum SPL	125dB 1% THD
Power Requirements	9 - 48 Volts phantom power
Switchable Bass Filter	-4dB per octave at 400 Hz to -6dB per octave at 100 Hz
Switchable Pad	-10dB
Cable	7.5 metres
Termination	Male 3 Pin XLR
Dimensions	12mm Head, 6mm Flexible shaft

Ordering

Colour	Black	White
Part Number	C 8SE	C 8SEW

Suspended Cardioid Condenser Microphone - C3SE Series

Wideband cardioid condenser microphone designed to be suspended in places of worship, conference halls, theatres etc.

Features

- Response optimised for consistent sound quality
- Slimline design
- Engineered in high quality brass
- Strong lightweight cable
- Fully balanced and terminated in male 3 pin XLR
- Short flexible shaft
- Knuckle for easy adjustment of vertical angle
- Finished in satin black or white
- Ceiling mount available as optional extra

Specifications

Frequency Response	50 Hz - 18 KHz
Sensitivity	-47dB +/- 3 dB at 1 KHz (0 dB = 1 V/u.bar)
Impedance	200 Ohms
S/N Ratio	64dB(A)
Maximum SPL	125dB 1% THD
Power Requirements	9 - 48 Volts phantom power
Switchable Bass Filter	-4dB per octave at 400 Hz to -6dB per octave at 100 Hz
Switchable Pad	-10dB
Cable	7.5 metres
Termination	Male 3 Pin XLR
Dimensions	12mm Head, 6mm Flexible shaft

Ordering

Colour	Black	White
Part Number	C 3SE	C 3SEW

Suspension Accessories

Ceiling Plate

CLOCKAUDIO

For C 3SE & C 85E

Ordering

Colour	Black	White
Part Number	CP 73	CP 73W

C900 Combination Series

Cardioid Condenser Microphone

CLOCKAUDIO

Designed as a rugged wide band Cardioid Condenser Microphone for multiple uses.

Features

- Wide band response
- Built in pop shield
- Easy click connection with combination shafts and stands
- Engineered in high quality brass
- Satin Black finish

Specifications

Type	Condenser (back electret)
Polar Pattern	Cardioid
Frequency Response	50 Hz - 20 KHz
Sensitivity	-48dB +/- 3dB @ 1 KHz (0dB = 1 V/Pa)
Impedance	1.8 KOhms
S/N Ratio	68dB(A)
Maximum SPL	126dB
Power Requirements	9 - 48 Volts phantom power via a PPA adaptor
Termination	Switchcraft 3 pin Tini Q
Dimensions	57mm x 19mm

Ordering

Part Number	C 900

Slimline Cardioid Condenser Microphone

Short, slimline Cardioid Condenser Microphone ideal for use in controlled acoustic environments such as conference halls, centres of worship and broadcasting.

Features

- Response optimised for consistent sound quality
- Superior grade components used throughout
- Easy click connection with combination shafts and stands
- Engineered in high quality brass
- Finished in Satin Black

Specifications

Frequency Response	50 Hz - 18 KHz
Sensitivity	-47dB +/- 3dB @ 1 KHz (0dB = 1 V/Pa)
Impedance	1.8 KOhms
S/N Ratio	64dB(A)
Maximum SPL	125dB 1% THD
Power Requirements	9 - 48 Volts phantom power via a PPA adaptor
Termination	Switchcraft 3 pin Tini Q
Dimensions	45mm x 12mm

Ordering

Part Number	C 3H

Mini Shotgun Condenser Microphone

Developed for speech purposes in a wide range of pro and live sound applications including places of worship, conference and leisure centres.

Features

- Slim mini shotgun
- Optimised for speech clarity
- Superior grade components
- Easy click connection with combination shafts and stands
- Unobtrusive slimline design
- Engineered in high quality brass
- Finished in Satin Black

C900 Combination Series (cont.)

Specifications

CLOCKAUDIO

Type	Condenser (back electret)
Polar Pattern	Hyper cardioid
Frequency Response	50 Hz - 18 KHz
Sensitivity	-47dB +/- 3dB @ 1 KHz (0dB = 1 V/Pa)
Impedance	1.8 KOhms
S/N Ratio	64dB(A)
Maximum SPL	125dB 1% THD
Power Requirements	9 - 48 Volts phantom power via a PPA adaptor
Termination	Switchcraft 3 pin Tini Q
Dimensions	151mm with W8 windshield

Ordering

Part Number	C 800H

Semi Rigid Short Shafts

Semi rigid 300mm or 400mm shafts fitted with Phantom Power Adaptor at the bottom end and knuckle joint at tip with Switchcraft Tini Q - 3 pin female connector.

Ordering

Part Number	Lengths (mm)	Terminations
CA 30	300	Bottom end Male 3 pin XLR
CA 40	400	Tip Switchcraft Tini Q 3 pin female connector

Heavy Stable Shock Absorbing Base

Floor mounting shock absorbing microphone base (required with CA900 shaft).

Ordering

Part Number	Height	Base Diameter
SM 155	42.5mm	155mm

Phantom Power Adaptor

9 - 48 Volt phantom power adaptor for electret condenser microphones.

Features

- Switchable Bass cut filter
- Switchable Pad
- Fully balanced output
- Surface mount technology
- Robust all metal construction
- Finished in satin black

Specifications

Power Requirements	9 - 48 Volts phantom power
Switchable Bass Filter	-4dB per octave at 400 Hz to -6dB per octave at 100 Hz
Switchable Pad	-10dB
Impedance	200 Ohms
Termination	Male XLR
Dimensions	19mm dia, 92mm overall length

Ordering

Part Number	PPA

C900 Combination Series (cont.)

Floor Standing Long Shaft

CLOCKAUDIO

Long rigid shaft (choice of two lengths) and short upright shaft connected by a separate, lockable swivel joint allowing adjustments to angle, height and reach. The long shafts have a Phantom Power Adaptor at the bottom end and knuckle joint at tip with Switchcraft Tini Q - 3 pin female connector. A bolt and washer are supplied to secure the short shaft to the SM155 floor mounting shock absorbing base

Ordering

Part Number	Long Shaft Length (mm)	Short Shaft Length (mm)	Terminations
CA 700	700	350	Long shafts Bottom end - Male 3 pin XLR
CA 900	1200	350	Tip - Switchcraft Tini Q 3 pin female connector

Phantom Power Adaptor with Knuckle Joint

Phantom Power Adaptor with knuckle joint and Switchcraft Tini Q - 3 pin female connector.

Ordering

Part Number	Height (mm)
CAK 1	160 (including Switchcraft connector)

Mini Table Stand

Table microphone base fitted with Tini Q - 3 pin female connector and 10 ft (3 metres) of cable requiring a Phantom Power Adaptor.

Ordering

Part Number	Height (mm)	Base Diameter (mm)
S 750	70 (including Switchcraft connector)	75

Boundary Layer Condensers

Omni Directional Button Ceiling Mount

CLOCKAUDIO

Designed for surveillance and recording in sensitive areas - banks, airports, railway stations, law courts, conference and convention centres.

Features

C 007

- Boundary layer condenser
- Omnidirectional
- High quality engineering
- Non-reflective delrin
- Non-conductive body
- Ease of mounting
- Opaque white finish for low visibility mounting

Specifications

Termination	Male XLR	Open ended
Type	Condenser (back electret)	Condenser (back electret)
Polar Pattern	Omnidirectional	Omnidirectional
Frequency Response	50Hz - 20KHz	50Hz - 20KHz
Sensitivity (0dB=1V/Pa)	-42.5dB +/- 2dB at 1KHz	-42.5dB +/- 2dB at 1KHz
Impedance	200 ohm	1K ohm
Power Requirements	9 - 48volts phantom power	2v - 10v max through series resistor, Optimum voltage 4.5 V
Switchable Bass Filter	4dB per octave at 400 Hz to - 6dB per octave at 100 Hz	-
Switchable Bass Pad	- 10dB	-
S/N Ratio	40dB (A)	40dB (A)

Ordering

CLOCKAUDIO

Termination	White Derlin	White Derlin Water Resistant	Black Delrin	Black Delrin, Brushed Aluminium Finish
Male XLR	C 007E	C 007WR	C 007EBLK	C 007EA
Open End	C 007	-	C 007BLK	C 007A

Boundary Layer Professional Microphone

Cardioid boundary layer condenser microphone, particularly suitable for speech purposes in a wide range of Pro and live sound applications including conference, lectern and theatre. Fully balanced output. Manufactured in high quality brass with concealed cable and fixing screw mounting and finished in non reflective Stone Grey Nextel.

Features

- Boundary layer condenser microphone
- Cardioid polar pattern
- Fully balanced
- High quality engineering in solid brass
- Concealed cable and fixing screw mounting
- Non-reflective Stone Grey Nextel finish

Specifications

Frequency Response	50Hz - 18KHz
Sensitivity	-47dB +/- 3dB at 1KHz (0dB=1V/Pa)
Impedance	200 Ohms
Power Requirements	9 - 48volts phantom power
S/N ratio	64dB (A)
Termination	Male 3 pin XLR

Ordering

Part Number	C 008E

Omni Directional Flat Plate

Omnidirectional boundary layer condenser microphone for easy use on large surfaces in a wide range of professional sound situations. Ideal for mounting on walls, floors, pianos etc. A smooth response with the hemispherical polar pattern providing natural sound with a good sense of depth for optimum bass.Very low profile and finished in Stone Grey Nextel with 3 metres /295" of cable attached.

Features

- Boundary layer condenser microphone
- Omni directional polar pattern
- Wide range smooth response
- Very low profile
- Stone Grey Nextel finish

Specifications

Type	Condenser (back electret)
Polar Pattern	Omni directional (beyond boundary)
Frequency Response	30Hz - 20KHz
Sensitivity	-42.5dB +/- 2dB at 1KHz (0dB=1V/Pa)
Impedance	200 Ohms
Power Requirements	9-48volts phantom power
Switchable Bass Filter & -10dB switchable Pad	✓
S/N ratio	68dB (A)
Termination	Male 3 pin XLR

Ordering

Part Number	C 009E

Boundary Layer Condensers (cont.)

Low Profile Omni/Cardioid Condenser Through Desk

CLOCKAUDIO

Omnidirectional (C003E) or Cardioid (C004E) Boundary Layer condenser microphones designed for a wide range of installed pro sound, conferencing or security situations. Wide smooth response. Balanced output. Simple through - desk mounting. Low profile at surface level. Made in high quality brass and finished in Satin Black or Matt White.

Features

- Engineered in high quality Brass
- Omnidirectional or Cardioid Polar Pattern
- Wide smooth response
- Balanced output
- Simple through-desk shock mounting
- Low profile at surface level
- Finished in Satin Black or Matt White

C 003E C 004E

Specifications

Part Number	C 003E / EW	C0 04E / EW
Type	Condenser (back electret)	Condenser (back electret)
Polar Pattern	Omnidirectional	Cardioid
Frequency Response	20Hz - 20KHz	100Hz - 16KHz
Sensitivity (0dB = 1V/Pa)	-42dB +/-3dB at 1KHz	-47dB +/-3dB at 1KHz
Impedance	200 Ohms	200 Ohms
S/N Ratio	58dB(A)	1.8 K Ohms
Power Requirements	9 - 48 volts phantom power	9 - 48 volts phantom power
Switchable Bass Filter	-4dB per octave at 400 Hz to -6dB per octave at 100 Hz	-4dB per octave at 400 Hz to -6dB per octave at 100 Hz
Termination	Male 3 pin XLR	Male 3 pin XLR

Ordering

Colour	Omni	Cardiod
Black	C 003E	C 004E
White	C 003EW	C 004EW

Low Profile Omnidirectional Condenser Microphone

Omnidirectional low profile boundary layer condenser professional microphone. Ideal for mounting onwalls, floors, pianos etc. A smooth response with the hemispherical polar pattern providing natural sound with a good sense of depth for optimum bass. Very low profile and finished in Stone Grey Nextel with 3 metres /295" of cable attached.

Features

- Boundary layer condenser microphone
- Omni directional polar pattern
- Wide range smooth response
- Very low profile

Type	Condenser (back electret)
Polar Pattern	Omni directional (beyond boundary)
Frequency Response	50Hz - 18KHz
Sensitivity	-47dB +/- 3dB at 1KHz (0dB=1V/Pa)
Impedance	200 Ohms
Power Requirements	9 - 48volts phantom power
S/N ratio	64dB (A)
Termination	Male 3 pin XLR

Ordering

Part Number	C 002E

Boundary Layer Condensers (cont.)

Mini Half Cardioid Low Profile Microphone

CLOCKAUDIO

Half cardioid, small, light, sensitive professional boundary layer condenser microphone for use in a wide range of Pro audio applications, including conference, lectern and theatre.

Features

- Boundary layer condenser microphone
- Half Cardioid Polar Pattern
- Fully balanced
- Low profile
- Stone Grey Nextel finish

Specifications

Type	Condenser (back electret)
Polar Pattern	Half Cardioid
Frequency Response	50Hz - 18KHz
Sensitivity	-48dB +/- 3dB at 1KHz (0dB=1V/Pa)
Impedance	200Ohms
Power requirements	9 - 48volts phantom power
Switchable Bass Filter & -10dB switchable Pad	✓
S/N ratio	64dB (A)
Termination	Male 3 pin XLR

Ordering

Part Number	C 006E

RF Series

CLOCKAUDIO

The new CLOCKAUDIO RF product series has been developed in direct response to interference (noise) issues which have recently been introduced into microphones, IP phones, hearing aids etc. by popular GSM devices such as PDA's, mobile phones, mobile phones with two way walkie- talkie capability. The noise emitted from these devices can wreak havoc on everything from a simple phone call to a complex video conference, and everything in between. These GSM devices emit a periodic hand shaking "sync signal " to the nearest antenna tower even when these devices are at rest which creates noise, as well as data streaming noise when receiving or making calls, text messaging, sending or receiving e-mails or web surfing. Depending on the distance of the PDA or mobile device to the antenna tower, these devices will vary their strength in order to ensure proper hand shaking which can result in loud distracting noises which takes the focus away from the real business at hand, YOUR BUSINESS. CLOCKAUDIO's new " RF Friendly " series of microphones completely strips out these artefacts without any degradation of audio quality, frequency response or sensitivity, and allows you to conduct business as usual without the need to have your conference participants " check your PDA or mobile phone at the door ". Selectable bass cut filter and pre-attenuation switch facilities are not available on RF Series products. Audio specifications and dimensions for all the microphones remain unchanged, with the exception of the SM20/RF and SM 80-PPA/RF Shock Mounts.

C3-RF Series Cardioid Condenser Microphones

Cardioid Condenser Microphones designed for use in conference halls, places of worship, broadcasting and paging systems.

Features

- Response optimised for consistent sound quality
- Unobtrusive slimline design
- Superior grade components
- Engineered in high quality brass
- Finished in satin black
- Fully flexible or semi rigid gooseneck shaft
- Choice of shaft length
- C301E/RF fitted with knuckle joint giving both
- Horizontal rotation and vertical angle adjustment
- -S in part number designates with silent reed switch and LED indicator, example C31ES/RF

RF Series (cont.)

Specifications

CLOCKAUDIO

Type	Condenser (back electret)
Polar Pattern	Cardioid
Frequency Response	50 Hz - 18 KHz
Sensitivity	-47dB +/- 3dB at 1 KHz (0dB = 1 V/Pa)
Impedance	200 Ohms
S/N Ratio	64dB (A)
Maximum SPL	125dB 1% THD
Power Requirements	9 - 48 volts phantom power
Termination	Male 3 Pin XLR

Ordering

Part Number	Overall Length (mm)	Mount/ Termination	Shaft Diameter (mm)
C 31E/RF	180	XLR	8.0
C 32E/RF	280	XLR	8.0
C 33E/RF	380	XLR	8.0
C 34E/RF	480	XLR	8.0
C 35E/RF	580	XLR	8.5
C 36E/RF	680	XLR	8.5
C 301E/RF	180	XLR	12 Head

RF Mini Shotgun Microphone

Cardioid boundary layer condenser microphone, particularly suitable for speech purposes in a wide range of Pro and live sound applications including conference, lectern and theatre. Fully balanced output. Manufactured in high quality brass with concealed cable and fixing screw mounting and finished in non reflective Stone Grey Nextel.

Features

- Slim mini shotgun
- Optimised for speech clarity
- Superior grade components
- Unobtrusive slimline design
- Engineered in high quality brass
- Finished in satin black

Type	Condenser (back electret)
Polar Pattern	Cardioid
Frequency Response	50Hz - 18KHz
Sensitivity	-47dB +/- 3dB at 1KHz (0dB=1V/Pa)
Impedance	200 Ohms
Power Requirements	9 - 48volts phantom power
S/N ratio	64dB (A)
Termination	Male XLR

Ordering

Part Number	Overall Length (mm)	Mount/ Termination
C 800E/RF	465	XLR
C 801E/RF	262	XLR

Slim Line Mini Shotgun Microphone

CLOCKAUDIO

Hypercardioid Condenser Microhpone Designed for applications requiring directionality and high quality performance such as:Conference rooms, podiums, broadcast, live sound, banks and financial trading centres.

Features

- Slim mini shotgun
- Optimised for speech clarity
- Superior grade components
- Unobtrusive slim line design
- Engineered in high quality brass
- Finished in satin black

Ordering

Part Number	Lengths (mm)	Terminations
C815E-RF	10mm head dia., 7mm shaft dia., 315mm overall length	Male 3 Pin XLR
C816E-RF	10mm head dia., 7mm shaft dia., 440mm overall lenght	Male 3 Pin XLR

Semi Rigid Short Shafts

Semi rigid 300mm or 400mm shafts fitted with Phantom Power Adaptor at the bottom end and knuckle joint at tip with Switchcraft Tini Q - 3 pin female connector.

Ordering

Part Number	Lengths (mm)	Terminations
CA 30-RF	300	Bottom end Male 3 pin XLR
CA 40-RF	400	Tip Switchcraft Tini Q 3 pin female connector

Floor Standing Long Shaft

Long rigid shaft (choice of two lengths) and short upright shaft connected by a separate, lockable swivel joint allowing adjustments to angle, height and reach. The long shafts have a Phantom Power Adaptor at the bottom end and knuckle joint at tip with Switchcraft Tini Q - 3 pin female connector.
A bolt and washer are supplied to secure the short shaft to the SM155 floor mounting shock absorbing base.

Ordering

Part Number	Long Shaft Length (mm)	Short Shaft Lenght (mm)	Terminations
CA 700-RF	700	350	Long shafts Bottom end - Male 3 pin XLR
CA 900-RF	1200	350	Tip - Switchcraft Tini Q 3 pin female connector

Phantom Power Adaptor with knuckle joint

Phantom Power Adaptor with knuckle joint and Switchcraft Tini Q - 3 pin female connector

Ordering

Part Number	Height (mm)
CAK 1-RF	60 (including Switchcraft connector)

CS-RF Series Boundary Layer Microphones

CLOCKAUDIO

The CS Series (Consultant Series) was developed as a result of input and recommendations of key consultants in boardroom AV integration. The goal was to minimise the number of microphones on the conference table, but also keeping in mind performance, ease of installation and aesthetics, which are very important in these projects. The results of these discussions are the *CS1, CS2 and CS3 microphones. The CS2 is a dual element boundary layer condenser microphone, with a half-cardioid polar pattern. It is designed to be placed in the middle of the conference table, with each element facing the participants. These microphones are made of solid brass, and include a two-metre bottom exit multi-core open-ended cable for permanent installation. The Phantom power adaptor (PPA) is incorporated in the brass housing and will accept 9 to 48 volts DC (phantom power). The CS3 microphone has the same characteristics as the CS2 with the addition of a third element. This microphone is to be positioned closer to the end of the conference table in order to capture the participants facing each other and also the participant sitting at the extremity of the table. If the participant at the end of the table is further away, it is then possible to use a combination of a CS2 and *CS1 (single element version) to accommodate this situation. The NEW CS4 is the latest addition to the series, incorporating four separate elements. This microphone system has four individually cabled mic elements and is designed for permanent installation. All microphone housings are available in either Black Nextel or Satin Nickel finish.

*The CS1 microphone accommodates a side and bottom cable exit for mobile and permanent applications.

Features

- Boundary layer condenser microphone
- Half cardioid polar pattern
- Fully balanced
- High quality engineering in solid brass
- Non-reflextive black nextel finish
- Available in single, dual and tri element versions

Specifications

Type	Condenser (back electret)
Polar Pattern	Half Cardioid
Frequency Response	50 Hz - 18 KHz
Sensitivity	-47dB +/- 3dB @ 1KHz (0dB = 1 V/Pa)
Impedance	200 Ohms
S/N Ratio	64dB(A)
Maximum SPL	125dB 1% THD
Power Requirements	9 - 48 volts phantom power
Cable	2 metres
Mounting	M10 x 1 Hollow bolt with nut and washer

Ordering

Part Number	Termination	Dimensions
CS1	Open ended	55mm x 44mm x 22mm
CS2	Open ended	85mm x 44mm x 22mm
CS3	Open ended	85mm x 65mm x 22mm
CS4	Open ended	

Boundary Layer Professional Microphone

Developed for speech purposes in a wide range of pro and live sound applications including conference, lectern and theatre.

Features

- Boundary layer condenser microphone
- Cardioid polar pattern
- Fully balanced
- High quality engineering in solid brass
- Concealed cable and fixing screw mounting
- Non-reflective Stone Grey Nextel finish

Specifications

CLOCKAUDIO

Frequency Response	50 Hz - 18 KHz
Sensitivity	47dB +/- 3dB at 1 KHz (0dB = 1 V/Pa)
Impedance	200 Ohms
S/N Ratio	64dB (A)
Maximum SPL	125dB 1% THD
Power Requirements	9 - 48 Volts Phantom Power
Cable	3 metres
Termination	Male XLR
Dimensions	70mm x 22mm
Mounting	2 x M6 set screws

Ordering

Part Number	C 008E-RF

Retractable Through-Table

This retractable boundary layer through table microphone, with a built-in mechanism that will allow the user to make the microphone disappear without having to physically remove it from the table. This is achieved by simply pressing the top of the microphone downwards until it locks; then by pressing the microphone again it will raise itself back to its original position above the surface of the table.

Features

- Easy to install
- Low profile at surface level
- Unique ability to lock capsule away from sight when not in use
- Robust brass construction
- Built-in RF filter
- Balanced output
- Supplied with 2m 2 core + screen cable
- Satin Nickel or Black Nextel finish

CRM100-RF

CRM102-RF

Specifications

Part Number	CRM100-RF	CRM102-RF
Type	Condenser	Condenser
Polar Pattern	Omnidirectional	Cardioid
Frequency Response	30Hz - 20 KHz	50Hz - 18 KHz
Sensitivity	-42.5dB +/- 3dB @ 1 KHz (0dB = 1 V/Pa)	-42.5dB +/- 3dB @ 1 KHz (0dB = 1 V/Pa)
Impedance	200 Ohms	200 Ohms
S/N Ratio	68dB(A)	64dB(A)
Maximum SPL	120db at 1KHz 1% T.H.D.	125db at 1KHz 1% T.H.D.
Power Requirements	9 - 48 volts phantom power	9 - 48 volts phantom power
Termination	Open ended	Open ended
Dimensions	Above Table: 15mm, Dia.: 36mm Below Table: 111mm, Dia.: 30mm	Above Table: 15mm Dia.: 36mm Below Table: 111mm, Dia.: 30mm

RF Series (cont.)

Boundary Layer Through Desk Microphones

CLOCKAUDIO

Omnidirectional (C003E-RF) or Cardioid (C004E-RF) Boundary Layer Condenser Microphones designed for a wide range of installed pro sound, conferencing or security situations.

Features

- Engineered in high quality Brass
- Omnidirectional or Cardioid Polar Pattern
- Wide smooth response
- Balanced output
- Simple through-desk shock mounting
- Low profile at surface level
- Finished in Satin Black or Matt White

C 003E-RF C 004E-RF

Specifications

Part Number	C 003E-RF	C 004E-RF
Type	Condenser	Condenser
Polar Pattern	Omnidirectional	Cardioid
Frequency Response	20 Hz - 20 KHz	100 Hz - 16 KHz
Sensitivity (0dB = 1 V/Pa)	-42dB +/- 3dB @ 1 KHz	-47dB +/- 3dB @ 1 KHz
Impedance	200 Ohms	200 Ohms
S/N Ratio	58dB(A)	1.8 K Ohms
Power Requirements	9 - 48 volts phantom power	9 - 48 volts phantom power
Termination	Male 3 pin XLR	Male 3 pin XLR
Overall Length mm)	90.5mm	90.5mm
Mount Diameter (mm)	23.5mm	23.5mm
Visible Height (mm)	15mm	22mm
Head Diameter (mm)	31mm	31mm

Through-Ceiling Omnidirectional Condenser Microphone

Designed for surveillance and recording in sensitive areas - banks, airports, railway stations, law courts, conference and convention centres.

Features

- Immune to RF artifacts
- Boundary layer condenser
- Omnidirectional
- High quality engineering
- Solid brass body
- Bi-Colour LED
- Ease of mounting
- Low visibility mounting

Specifications

Frequency Response	50 Hz - 20 KHz
Sensitivity	-42.5dB +/- 3dB @ 1 KHz (0dB = 1 V/Pa)
Impedance	200 Ohms
S/N Radio	58dB (A)
Maximum SPL	120dB 1% THD
Power Requirements	9 - 48 volts Phantom Power
LED	Red 2 Volts - Green 2 Volts
Cable	1M
Termination	XLR
Dimensions	Head Diameter 20mm, Overall Length 35mm, Overall Length M12 x 1 nut and washer

Ordering

Part Number	Description
C007EB-LED-RF	Through-Ceiling Omnidirectional Condenser Microphone

Cardioid Condenser Microphone

CLOCKAUDIO

Developed for speech purposes in a wide range of pro and live sound applications including conference, lectern and theatre.

Features

- Fully balanced
- High quality engineering in solid brass
- Concealed cable and fixing screw mounting
- Non-reflective Stone Grey Nextel finish

Specifications

Frequency Response	50 Hz - 18 KHz
Sensitivity	-47dB +/- 3dB @ 1 KHz (0dB = 1 V/pa)
Impedance	200 ohms
S/N Ratio	64dB (A)
Maximum SPL	125dB THD 1%
Power Requirements	9 - 48 Volts Phantom Power
Cable	3m
Termination	Male XLR
Dimensions	70mm x 22mm

Ordering

Part Number	C008E-RF

Omnidirectional Condenser Microphone

Designed for easy use on large surfaces in a wide range of professional sound situations. Ideal for mounting on walls, floors, piano etc. The hemispherical polar pattern provides natural sound with a good sense of depth for optimum bass.

Features

- Wide range smooth response
- Very low profile
- Stone Grey Nextel finish

Specifications

Frequency Response	30 Hz - 20 KHz
Sensitivity	-42.5dB +/- 3dB at 1 KHz (0dB = 1 V/Pa)
Impedance	200 Ohms
S/N Ratio	68dB(A)
Maximum SPL	120dB 1% THD
Power Requirements	9 - 48 volts Phantom Power
Cable	3m
Termination	XLR
Dimensions	160 mm x 9 mm

Ordering

Part Number	C009E-RF

RF Series (cont.)

Through-Desk Microphone

CLOCKAUDIO

Made of solid brass from top to bottom, demanding sonic quality with an extremely robust housing for those extreme environments.

The built-in phantom power module is fully RF protected against interference from GSM devices operating in the 800Mhz – 1.2Mhz band.

Features

C011E-RF C012E-RF

- Immune to RF artefacts
- Wide smooth response
- Balanced output
- Simple shock mounting
- Low profile at surface level

Specifications

Part Number	C011E-RF	C012E-RF
Type	Condenser	Condenser
Polar Pattern	Omnidirectional	Cardioid
Frequency Response	50 Hz - 20 KHz	50Hz - 18 KHz
Sensitivity	-42dB +/- 3dB @ 1 KHz (0dB = 1 V/Pa)	-47dB +/- 3dB @ 1 KHz (0dB = 1 V/Pa)
Impedance	200 Ohms	200 Ohms
S/N Ratio	58dB(A)	60dB(A)
Maximum SPL	120db at 1KHZ 1% T.H.D.	120db at 1KHz 1% T.H.D.
Power Requirements	9 - 48 volts Phantom Power	9 - 48 volts Phantom Power
Termination	Male 3 pin XLR	Male 3 pin XLR
Dimensions	Overall Length: 85mm Diameter: Shaft 19mm, Head 30mm	Overall Length: 90mm Diameter: Shaft 19mm, Head 28mm

Desk Top Microphone

These desk top microphones combines the slim lines and functionality of the S135 microphone stand, with the sonic quality and robust housing of the C011E-RF microphone.

Features

C015E-RF

- Immune to RF artefacts
- Optimised for speech clarity
- Programmable touch pad switching
- Unobtrusive design
- Built in Phantom Power Module

C016E-RF

Specifications

Part Number	C015E-RF	C016E-RF
Type	Condenser	Condenser
Polar Pattern	Omnidirectional	Cardioid
Frequency Response	50 Hz - 20 KHz	50Hz - 18 KHz
Sensitivity	- 42db ± 3db @ 1 KHz (0db = 1VPa)	-47dB +/- 3dB @ 1 KHz (0dB = 1 V/Pa)
Impedance	200 Ohms	200 Ohms
S/N Ratio	58dB(A)	60dB(A)
Switching	Programmable for PTT, PTM & Latching	Programmable for PTT, PTM & Latching
Power Requirements	48V Phantom Power	48V Phantom Power
Termination	5Pin XLR with remote switch ability, Optional 3Pin XLR Variant	5Pin XLR with remote switch ability, Optional 3Pin XLR Variant
Dimensions	Length: 120mm, Width: 100mm Height: 30mm	Length: 120mm, Width: 100mm Height: 30mm

Low Profile Microphone

CLOCKAUDIO

For permanent install

Omnidirectional low profile boundary layer condenser microphone, designed for Permanent Install applications. In this configuration the cable exit is done through a 10mm screw mounted under the microphone which also secures it to the table. A smooth response with hemispherical polar pattern providing natural sound with a good sense of depth for optimum bass. Very low profile and finished in Stone Grey Nextel with 3 metres of cable attached. Includes in line PPA-RF.

Features

- Boundary layer condenser microphone
- Omnidirectional polar pattern
- Bottom exit
- Fully balanced
- Wide range smooth response
- Very low profile

Specifications

Frequency Response	50 Hz - 18 KHz
Sensitivity	-47dB +/- 3dB @ 1 KHz (0dB = 1 V/Pa)
Impedance	200 Ohms
S/N Ratio	64dB(A)
Maximum SPL	125dB 1% THD
Power Requirements	9 - 48 volts phantom power
Cable	3m
Termination	Male XLR
Dimensions	70mm x 22mm

Ordering

Part Number	C022E-BEX-RF

Low Profile Microphone

For mounting

Omnidirectional low profile boundary layer condenser microphone. Ideal for mounting on walls, floors, pianos, etc. A smooth response with hemispherical polar pattern providing natural sound with a good sense of depth for optimum bass. Very low profile and finished in Stone Grey Nextel with 3 metres of cable attached. Includes PPA-RF.

Features

- Boundary layer condenser microphone
- Omnidirectional polar pattern
- Fully balanced
- Wide range smooth response
- Very low profile

Specifications

Frequency Response	50Hz - 18 KHz
Sensitivity	-47dB +/- 3dB @ 1 KHz (0dB = 1 V/Pa)
Impedance	200 Ohms
S/N Ratio	64dB(A)
Maximum SPL	125db at 1KHz 1% T.H.D.
Power Requirements	9 - 48 volts Phantom Power
Cable	3m
Termination	Male XLR
Dimensions	70mm x 22mm

Ordering

Part Number	C002E-RF

Cardioid Condenser Hand Held Microphone

CLOCKAUDIO

Professional condenser handheld microphone designed for vocal and speech applications.

Specifications

Type	Condenser
Polar Pattern	Cardioid
Frequency Response	50 Hz - 20 KHz
Sensitivity	-48dB +/- 3dB @ 1 KHz (0dB = 1 V/pa)
Impedance	200 ohms
S/N Ratio	68dB (A)
Maximum SPL	130dB THD 1%
Power Requirements	9 - 48 Volts Phantom Power
Switchable Base Filter	4dB per octave @ 400 Hz to -6dB per octave @ 100 Hz
Switchable Pad	-10dB
Termination	Male 3 Pin XLR
Overall Length	225mm
Head Diameter	49mm
Accessories	Presentation Case and Swivel Stand Adaptor included

Ordering

Part Number	C 650E

Dynamic Cardioid Hand Held Microphone

Designed as a versatile professional dynamic microphone for use in a wide variety of vocal, speech and instrument applications.

Features

- Rugged die cast metal construction
- Cardioid Polar Pattern
- Wide smooth response
- Neodymium magnet for high sensitivity
- Balanced output
- 500S Silent magnetic reed on - off switch
- Black soft touch finish for reduced handling noise
- In presentation case with swivel stand adaptor

Specifications

Type	Dynamic
Pollar Pattern	Cardioid
Frequency Response	50 Hz - 16 KHz
Sensitivity	-55dB +/- 3dB @ 1 KHz (0dB = 1 V/pa)
Impedance	500 Ohms Balanced
Termination	Male XLR
Switch	(D500S) Silent Magnetic Reed On - Off switch
Dimensions	175mm x 53.5mm
Accessories	Presentation case and swivel stand adaptor included

Ordering

Part Number	Magnet Type
D 500	Neodymium Magnet
D 500S	Silent Magneticc on-off Switch

Hand Held (cont.)

Slimline Cardioid Hand Held Microphone

CLOCKAUDIO

Professional cardioid condenser hand held microphone designed for a wide range of vocal and speech applications. Also suitable for many musical instrument applications.

Features

- Engineered in high quality Brass
- Cardioid Polar Pattern
- Wide smooth response
- Balanced output
- Finished in Satin Black
- Supplied in presentation case with swivel stand adaptor

Specifications

Type	Condenser (Back Electret)
Pollar Pattern	Cardioid
Frequency Response	50 Hz - 20 KHz
Sensitivity	-47dB +/- 3dB at 1KHz (0dB = 1V/Pa)
Impedance	200 Ohms
S/N Ratio	64dB(A)
Maximum SPL	125dB THD 1%
Power Requirements	9 - 48 volts phantom power
Switch	(D500S) Silent Magnetic Reed On - Off switch
Switchable Bass Filter	-4dB per octave at 400Hz to -6dB per octave at 100Hz
Switchable Pad	-10dB
Termination	Male 3 pin XLR
Overall length	165mm
Diameter	20mm

Ordering

Part Number	C 600

Dynamic ENG Hand Held Microphones

Dynamic Super Cardioid & Omni-Directional ENG Microphone. Designed for Electronic News gathering and Video Production.

Features

- Die-cast housing and steel grille screen
- Long shaft for easy handling
- Patented shock suspension
- Foam windshield
- Stand adaptor
- Finished in soft touch satin black

Specifications

Part Number	D525E	D550E
Type	Neodymium Dynamic	Neodymium Dynamic
Polar Pattern	Superior Cardioid	Omni-Directional
Frequency Response	50 Hz - 18 KHz	50 Hz - 18 KHz
Sensitivity	-54dBV/(1.6mV/Pa)	-54dBV/(1.6mV/Pa)
Impedance	300 ohms	300 ohms
Termination	Male 3 Pin XLR	Male 3 Pin XLR
Accessories	Foam Windshield, Stand Adaptor, Presentation Case	Foam Windshield, Stand Adaptor, Presentation Case

Hand held Accessories

Soft protective carrying case.

CLOCKAUDIO

Ordering

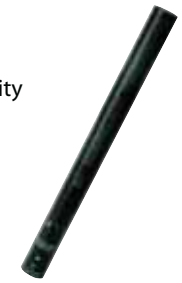
Part Number	CC 100

Shotgun

Shotgun Supercardioid Microphone

CLOCKAUDIO

Designed for use in Broadcast, Film/Video Recording and Theatre Sound Reinforcement.



Features

- Smooth Response for consistent sound quality
- Superior Grade Components
- Balanced output
- Selected Bass Roll Off and 10dB pad
- XLR Termination
- Finished in Satin Black

Specifications

Type	Condenser (back electret)
Pollar Pattern	Supercardioid
Frequency Response	50Hz - 20KHz
Sensitivity	-48dB +/-3dB @ 1KHz (0dB = 1V/Pa)
Impedance	200 Ohms
S/N Ratio	68dB (A)
Maximum SPL	126dB THD 1%
Power Requirements	9 - 48 Volts Phantom Power
Switchable Bass Filter	-4dB Per Octave at 400Hz to -6dB Per Octave at 100Hz
Termination	Male 3 Pin XLR
Accessories:	Windshield and Stand Adaptor fitted with Camera Shoe 5/8" Stand Thread
Dimensions	21mm / 238mm

Ordering

Part Number	C850E

Mini Shotgun Microphones

Developed for speech purposes in a wide range of pro and live sound applications including places of worship, conference and leisure centres, banks and financial trading centres

Features

- Slim mini shotgun
- Optimised for speech clarity
- Superior grade components
- Unobtrusive slimline design
- Engineered in high quality brass
- Finished in satin black

Specifications

Part Number	C800E	C800
Type	Condenser (back electret)	Condenser (back electret)
Polar Pattern	Hypercardioid	Hypercardioid
Frequency Response	50 Hz - 18 KHz	50 Hz - 18 KHz
Sensitivity	-47dB +/-3dB at 1 KHz (0dB = 1 V/Pa)	-47dB +/-3dB at 1 KHz (0dB = 1 V/Pa)
Impedance	200 Ohms	1.8 K Ohms
S/N Ratio	64dB(A)	64dB(A)
Maximum SPL	125dB 1% THD	125dB 1% THD
Power Requirements	48 Volts Phantom Power	1.5 - 9 Volts max. through series resistor
Optimum Operating Voltage	-	6 Volts
Switchable Bass Filter	- 4dB per octave at 400 Hz to - 6dB per octave at 100 Hz	-
Switchable Pad	-10dB	
Cable		2 metres
Termination	Male XLR	M10 x 1 Thread with shakeproof washer and nut
Dimensions	12mm dia. 458mm overall length, With W8 windshield 480mm	12mm dia. 375mm overall length, With W8 windshield 397mm

Shotgun (cont.)

Mini Shotgun Professional Microphones CLOCKAUDIO

Developed for speech purposes in a wide range of pro and live sound applications including places of worship, conference and leisure centres, banks and financial trading centres.

Features

- Slim mini shotgun fitted with a knucklejoint giving both lateral and vertical movement
- Optimised for speech clarity
- Superior grade components
- Unobtrusive slimline design
- Engineered in high quality brass
- Finished in satin black

Specifications

Part Number	C801E	C801
Frequency Response	50 Hz - 18 KHz	50 Hz - 18 KHz
Sensitivity	47dB +/- 3dB at 1 KHz (0dB = 1 V/Pa)	47dB +/- 3dB at 1 KHz (0dB = 1 V/Pa)
Impedance	200 Ohms	1.8 K Ohms
S/N Ratio	64dB(A)	64dB(A)
Maximum SPL	125dB 1% THD	125dB 1% THD
Power Requirements	9 - 48 Volts Phantom Power	1.5 - 9 Volts max. through series resistor
Switchable Bass Filter	- 4dB per octave at 400 Hz to - 6dB per octave at 100 Hz	
Switchable Pad	- 10dB	-
Cable	-	2 metres
Termination	PPA adaptor	Open ended
Base Mounting	M10 x 1 Thread with shakeproof washer and nut	M10 x 1 Thread with shakeproof washer and nut
Dimensions	12mm dia. 150mm overall length. With W8 windshield 172mm	12mm dia. 262mm overall length. With W8 windshield 285mm

Lavalier

Miniature Professional Microphone CLOCKAUDIO

Miniature high performance, omni directional Lavalier Condenser microphone designed for a wide range of "hands free" Broadcasting and Pro audio applications. Particularly suitable for acoustically difficult situations, commentaries, interviews, lectures, speeches, conferences and video, film, theatre and stage performances. Also useable for sound reinforcement on string instruments.

Features

- Omni Directional
- Back electret condenser
- Wide range smooth response
- Useable with most power modules and wireless transmitters
- "Hands Free" operation
- Finished in black or beige colour
- Wind shield and Tie clip included

Specifications

Frequency Response	20 Hz - 20 KHz
Sensitivity	-42dB +/- 3dB @ 1 KHz (0dB = 1 V/pa)
Impedance	1 K Ohm
Maximum SPL	120dB
Power Requirements	1.5 - 10 Volts
Cable	1.5 metres
Termination	Open ended
Dimensions	14mm x 5mm

Ordering

Colour	Satin Black	Beige
Part Number	CL 5	CL5 B

Lavalier (cont.)

Sub-Miniature Omni-Directional Microphone CLOCKAUDIO

Specifications

Frequency Response	50 Hz - 16 KHz
Impedance	1 K Ohm +/- 30%
Sensitivity	-44dB @ 1 KHz (0dB = 1 V/Pa)
Termination	Tini Q 4 Pin connector
Accessories	Tie clip and Foam windshield

Ordering

Colour	Satin Black	Beige
Part Number	CL 4	CL 4B

Lavalier Accessories

Clothing Clip Type	Metal	Metal Beige
Metal clothing clip for CL 5	CL 5CC	CL 5CCB
Clothing clip for CL 4	CL 4CC	CL 4CCB

Lightweight Headworn Microphones

Headworn Microphones - Micro Lightweight CLOCKAUDIO

Designed for use in theatres, presentations, broadcast studios and productions, places of worship and other applications requiring low profile headworn professional microphone.

Features

- Extremely lightweight and low profile
- Shaped and lightly sprung to fit any head contour and remain in place even during high activity
- Flexible boom arm for optimum positioning of microphone
- Perspiration drip barrier to protect microphone
- Omni Directional back electret condenser microphone
- Wide band smooth response
- Black/beige easy to clean finish

Specifications

Type	Condenser (back electret)
Polar Pattern	Omni Directional
Frequency Response	30Hz - 18KHz
Sensitivity	-33dB +/-3dB @ 1KHz (0dB = 1V/Pa)
Impedance	4.4K Ohms
Maximum SPL	115dB
Power Requirements	1.5 - 9V (standard operating voltage 1.5V)
Cable	140cm
Termination	Open ended
Accessories	Soft Protective carrying case

Ordering

Colour	Black	Beige
Part Number	CMH 2000	CMH 2000B

Lightweight Headworn Microphones (cont.)

Headworn Microphones - Lightweight

CLOCKAUDIO

Specifications

Type	Condenser (back electret)
Polar Pattern	Cardioid
Frequency Response	50Hz - 18KHz
Impedance	680 Ohms +/- 30%
Sensitivity	-50dB @ 1KHz (0dB - 1V/Pa)
Termination TAF4	Tini Q 4 Pin connector
HW 1200 Accessories	Soft protective carrying case

Ordering

Part Number	HW 1200

Rugged Lightweight Headworn Microphone

Designed for presentations, commentators, broadcast reporters and instructors. Particularly suitable for active aerobic and fitness instructors.

Features

- Plastic injected headband, gooseneck and capsule head for protection against corrosion
- Cables retain flexibility even with long exposure to perspiration and cosmetics
- Shaped, lightly sprung and with headband to fit all head contours comfortably and remain in place even with vigorous activity
- Flexible boom arm for optimum positioning of microphone
- Waterproofed Bi-directional Close talking back electret condenser microphone with smooth low feedback response

Specifications

Type	Condenser (back electret)
Polar Pattern:	Bi-directional close talking
Frequency Response	300Hz - 5KHz
Sensitivity	6mV/Pa
Impedance	1K Ohms
Maximum SPL	120dB
Power Requirements	1.3 - 12V (standard operating voltage 1.5V)
Cable	140cm
Termination	Open ended
Accessories	W15 Windshield included

Ordering

Part Number	HW 1500

Headworn Accessories

CLOCKAUDIO

Ordering

Part Number	Description
CC 101	Soft protective carrying case - For headworn microphones

Automatic Mixers

Digital Automatic Mixer

CLOCKAUDIO

The MR88 Automatic Microphone Mixer incorporates advanced DSP technology. It has been carefully designed to give outstanding performance and flexibility while maintaining simplicity of set up and use. Eight input channels, fully adjustable for microphone and line level, can be set up to be put on to either or both of the two output channels.

Features

- Easy set up with LCD display of all functions and settings from front panel and by PC through RS232 socket
- Fast, silent automatic microphone selection
- 8 Channel mic/line inputs on XLR connectors
- Record outputs for each input channel
- 2 Channel mic/line outputs on XLR and RCA phono connectors
- Output level LED meter
- 2 Band Equalisation on each input channel
- Compression
- Multi-level channel priority system
- Easy use with mono or stereo inputs
- Dual mono or stereo outputs
- Adjustable limiters on each input prevent channel overloads
- Adjustable 'off ' attenuation of each input channel
- Channel LEDs indicate active or locked out channels
- Select NOMA operation on/off
- Simple daisy chain set up for multiple microphone operations
- 48V phantom power individually selectable for each channel
- Remote VCA control and RS232
- External TTL control and monitoring of channel selection
- Security mode
- 1U case size, rack-mounting

Ordering

Part Number	MR 88

Microprocessor Controlled Automatic Microphone Mixer

CLOCKAUDIO

Features

- Easy set up with LCD display of all functions and settings
- Fast, silent automatic microphone selection
- Simple daisy-chain set up for multiple microphones
- 6 Channel mic/line inputs on XLR connectors
- Recorder outputs for each input channel
- 2 Channel mic/line outputs on XLR connectors and RCA phono
- Output level LED meter
- Channel LEDs indicate active or locked out channels
- Multi level channel priority system
- Easy use with mono or stereo inputs
- Stereo or dual mono outputs
- Adjustable limiters on each input
- Adjustable "off " attenuation of each input channel
- 12v Phantom Power selectable for each channel
- Select NOMA operation on/off
- Remote VCA control
- Monitor headphone output
- External TTL control and monitoring of each channel selection
- 1U case size, rack mounting
- Security mode

Ordering

Part Number	MR 66

Mixer Accessories

Ordering

CLOCKAUDIO

Part Number	Description
88 LC	Linking cable for MR88 - RJ45 connectors
66 LC	Linking cable for MR66 - Mini-DIN connectors

HEADSETS

Active Protection Stereo Headphones

CLOCKAUDIO

Designed as active ear defenders for protection against hazardous noises with the ability to set essential listening levels in each ear to hear normally. Suitable for use in a wide range of noisy environments including industrial and building locations, transport termini and sports and leisure locations

Features

- Defender system maintains preset listening level
- Wide bandwidth for natural sound to the ear
- Individual listening level adjustment for each ear
- Instant attenuation of loud reports (≥75dB) with fast recovery
- Comfortable padded ear cups giving high ambient noise attenuation
- Individually powered and rechargeable
- Batteries operate for up to 50 hours from full charge
- Adjustable padded headband for greater comfort
- Finished in Cobalt Blue Nextel with Black trim

Specifications

Frequency Response	20Hz - 18KHz
Sensitivity	104dB +/- 3dB at 1KHz
Ear Cup Attenuation	29dB
Microphone	Condenser (back electret)
Powering	3.6v 70mAH Ni-MH rechargeable batteries

Ordering

Part Number	AH 3000

Communications Headset

CLOCKAUDIO

The HS1000 is a ruggedly built headset with a choice of Dynamic or Condenser microphone and designed for use in a wide range of applications such as Theatres, Concert Halls and Studios. The earpieces efficiently reduce high surrounding noise and equally contain the received sounds when working in quiet environments

Features

- Choice of Dynamic or Condenser Microphone
- Wide band headphone audio quality
- Robust boom assembly
- Comfortable padded ear cups giving high ambient noise attenuation
- Adjustable padded headband for greater comfort
- Finished in Cobalt Blue Nextel with Black trim

Communications Headset (cont.)

Specifications

CLOCKAUDIO

Part Number	HS1000E	HS1000D
Microphone	Electret	Dynamic
Frequency Range	100Hz - 10KHz	150Hz - 10KHz
Impedance	1.6 KOhms @1KHz	300 Ohms
Powering	1.5v - 9v DC through series resistor	-
Cable Length	-	2 metres

Attenuation (dB)

Frequency (Hz)	125	250	500	1000	2000	3150	4000	6300	8000
Mean Value	24	26	34	33	39	43	44	35	36
Standard Deviation	2.5	2.0	1.8	1.9	2.0	2.5	3.2	2.1	2.9

Ordering

Part Number	Description
H 1000	Ear defender headphones
HS 1000D	Ear defender talk-back headset with dynamic microphone
HS 1000E	Ear defender talk-back headphone with condenser microphone

PAGING

Desk Mounting Dynamic Cardioid Paging Microphone

CLOCKAUDIO

Designed as a desk mounting cardioid paging microphone for easy use in all types of industrial, entertainment and commercial environments

Features

- Choice of Dynamic Cardioid microphone
- Response optimised for speech
- Latched or momentary switching
- LED “in use” indicator optional
- Pre-wired with 6.6 ft (2 metres) of 4 core/screen cable
- Rugged all metal construction
- Non reflective Matt Black finish

Specifications

Microphones Choice of	D33, D34, D43 and D44
Switches	Press to talk or latching
Cable	2 metres, 5 core open ended
Base width	110mm
Base height (front)	22mm
Base height (rear)	50mm
Base depth	160mm
Overall height	D33 = 350mm, D34 = 475mm, D43 = 350mm, D44 = 450mm

Ordering

Part Number	DMB1

UHF Multi Channel Wireless Microphone System

Designed as a versatile, flexible and easy to use multi channel system for use in a wide range of professional applications. Operating in the UHF Band for resistance to interference and using PLL synthesised Channels for easy selection at the diversity receiver and transmitter.

Systems

Versatile, flexible and easy to use multi channel system with two receiver full diversity reception. UHF operation for resistance to interference (Bands within the range 630 - 960 MHz according to local regulation). 192 PLL preselectable channels per Band. Compact half rack size full diversity receiver with full controls, comprehensive LCD display and balanced/unbalanced outputs. Choice of belt pack transmitter with Lavalier microphone or handheld transmitter microphone. Each with LCD display, easy to use controls for on/off, frequency selection and AF level. Electronic lock and physical protection of settings to avoid accidental operation. Range of included and optional accessories.

Ordering

Part Number	Description
CW 9000	Handheld Cardioid dynamic wireless system
CW 9001	Belt pack wireless system. Includes CL 6 Cardioid condenser lavalier microphone, clothing clip & foam windshield.
CW 9000C	Handheld Cardioid condenser wireless system.
CW 9001H12	Head worn - HW 1200 Cardioid condenser wireless system. Includes foam windshield & soft vinyl protective carrying case.
CW 9001H15	Head worn - HW 1500 Bi-Directional condenser wireless system. Includes soft vinyl protective carrying case.
CW 9001H20	Head worn - CMH 2000 Omni-Directional condenser wireless system. Includes soft vinyl protective carrying case.

CW9004 UHF Desk Wireless Transmitter

The CW9004 is a wireless desktop base, ready to accept a range of different slimline series Clockaudio microphones via a TINI-Q connector. An LCD display shows frequency and battery status, with controls including an on / off switch, frequency scan and select and an audio level control.

Features

- Power On/Off Frequency and AF level set
- Frequency and battery status
- Programmable touch switch and LED indicator
- 2 x AA batteries giving more than 9 hours use

Specifications

Frequency Range	630 - 960 MHz (According to local regulation)
Channel Frequencies	192 PLL selectable channels per frequency band
RF Output	10mw
Frequency Stability	±0.005%
Frequency Deviation	±48KHz
S/N Ratio	> 102dB
Audio Frequency Response	50Hz - 15KHz
Dynamic Range	> +110dB
Connections	3 Pin Mini XLR (TINI-Q Switchcraft)
Dimensions	L 125mm x W 115mm x (D) 40mm

Ordering

Part Number	Mount/Termination
CW9004	Wireless desktop base transmitter with Tini-Q connector, kit, includes receiver

Accessories: Microphone Models C310, C312, C313 and C314

Systems (cont.)

CW9005 UHF Desk Wireless Transmitter

The CW9005 is a wireless desktop base with an inbuilt omni-directional condenser microphone.

Features

- Power On/Off Frequency and AF level set
- Frequency and battery status
- Programmable touch switch and LED indicator
- 2 x AA batteries giving more than 9 hours use

Specifications

Frequency Range	630 - 960 MHz (According to local regulation)
Channel Frequencies	192 PLL selectable channels per frequency band
Polar Pattern	Omni-directional
Audio Bandwidth	50Hz - 18KHz
RF Output	10mw
Frequency Stability	±0.005%
Frequency Deviation	±48 KHz
S/N Ratio	> 102dB
Audio Frequency Response	50Hz - 15KHz
Dynamic Range	> +110dB
Dimensions	L 125mm x W 115mm x (D) 40mm

Ordering

Part Number	Mount/Termination
CW9005	Wireless desktop base transmitter with omni condenser mic, kit, includes receiver

Accessories: CU-2 Gang battery charging unit

CW9006 UHF Desk Wireless Transmitter

The CW9006 is a wireless desktop base with a 3-Pin female XLR, compatible with a full range of Clockaudio gooseneck microphones.

Features

- Power On/Off Frequency and AF level set
- Frequency and battery status
- Programmable touch switch and LED indicator
- 2 x AA batteries giving more than 9 hours use

Specifications

Frequency Range	630 - 960MHz (According to local regulation)
Channel Frequencies	192 PLL selectable channels per frequency band
RF Output	10mw
Frequency Stability	±0.005%
Frequency Deviation	±48KHz
S/N Ratio	> 102dB
Audio Frequency Response	50Hz - 15KHz
Dynamic Range	> +110dB
Output	24 Volts Phantom Power
Connections	3 Pin XLR
Dimensions	L 125mm x W 115mm x (D) 40mm

Ordering

Part Number	Mount/Termination
CW9006	Wireless desktop base transmitter, with XLR connector, kit, includes receiver

Accessories: Floor Stand

UHF Receiver

Features

- UHF operation for reduced interference
- Frequency Bands within 630MHz - 960MHz (according to regulation)
- 192 PLL selectable Channels per Band
- Full diversity reception with twin receivers
- Adjustable squelch for noise suppression
- Comprehensive LCD display for easy monitoring and operation
- Wide band frequency response
- Balanced and unbalanced outputs from receiver
- Rugged metal case
- Compact half rack size and easy to install

Specifications

System FM Carrier	UHF
Frequency Range	630 - 960 MHz (Bands according to local regulation)
Channel Frequency	192 PLL selectable Channels per Band
Frequency Stability	± 0.005%
S/N Ratio	> 100dB
Audio Output Level	-12dB
AF Output Impedance	600 Ohms
Squelch	Pilot Tone and Noise Mute
Power	External 12V DC; 500mA

Ordering

Part Number	CW 9000R

UHF Transmitters

Belt Pack Transmitter

Features

- 192 PLL selectable Channels (Frequency Bands according to regulation)
- On/off switch, frequency scan and select, audio level control
- LCD display of frequency and battery status
- 4 pin Tini Q connector for secure microphone connection
- High dynamic range and wide band response
- Lavalier Cardioid Condenser microphone. Lightweight Headworn microphones available as optional extras
- More than 8 hours use from 2 x AA batteries
- Lightweight miniature rugged plastic and metal case with easy to use controls protected from accidental adjustments
- Strong removable/reversible belt clip

Specifications

System FM Carrier	UHF for reduced interference
Frequency Range	630 - 960 MHz (Bands according to local regulation)
Channel Frequency	192 PLL selectable Channels per Band
RF Output	10mW
Frequency Stability	± 0.005%
Frequency Deviation	± 48 KHz
Frequency Response	50 Hz - 15 KHz
Dynamic Range	> +110dB
Controls	Power On/Off, Frequency and AF Level set

Ordering

Part Number	CW 900IT

UHF Transmitters (cont.)

Hand Held Transmitter

Features

- 192 PLL selectable Channels (Frequency Bands according to regulation)
- On/off switch, frequency scan and select, audio level control
- LCD display of frequency, AF level and and battery status
- Dynamic Cardioid microphone (Interchangeable Cardioid Condenser microphone head available as optional extra)
- RF, Audio, display and control (information as CW900IT above)
- More than 10 hours use from 2 x AA batteries
- Integrated dipole aerial
- Finished in soft touch black
- Coloured end covers for coding or identification

Specifications

Microphone	Dynamic Cardioid
LCD Display Information	Frequency, AF Level and Battery Status
Power	2 x AA batteries giving more than 10 hours use
RF, AF and control information as for CW900IT	

Ordering

Part Number	CW 9000T

Wireless Microphone Options

Headworn Microphone

Designed for use in theatres, presentations, broadcast studios and productions, places of worship and other applications requiring low profile headworn professional microphone.

Features

- Extremely lightweight and low profile
- Shaped and lightly sprung to fit any head contour and remain in place even during high activity
- Flexible boom arm for optimum positioning of microphone
- Perspiration drip barrier to protect microphone
- Omni Directional back electret condenser microphone
- Wide band smooth response
- Black or beige easy to clean finish

Specifications

Microphone	Condenser (Back Electret)
Polar Pattern	Omni Directional
Frequency Response	30 Hz - 18 KHz
Sensitivity	-33dB ± 3dB @ 1 KHz (0dB=1V/Pa)
Impedance	4.4 K Ohms
Power Requirements	1.5 - 9V (Standard operating voltage 1.5V)
Termination TAF4	Tini Q 4 Pin Connector

Ordering

Colour	Black	Beige
Part Number	CMH 2000	CMH 2000B

Rugged Lightweight Headworn Microphone

CLOCKAUDIO

Designed for presentations, commentators, broadcast reporters and instructors. Particularly suitable for active aerobic and fitness instructors.

Features

- Plastic injected headband, gooseneck and capsule head for protection against corrosion
- Cables retain flexibility even with long exposure to perspiration and cosmetics
- Shaped, lightly sprung and with headband to fit all head contours comfortably and remain in place even with vigorous activity
- Flexible boom arm for optimum positioning of microphone
- Waterproofed Bi-directional Close talking back electret condenser microphone with smooth low feedback response

Specifications

Microphone	Condenser (Back Electret)
Polar Pattern	Bi Directional close talking with W15 Windshield
Frequency Response	300 Hz - 5 KHz
Sensitivity	-44db ± 3dB @ KHz (0dB=1V/Pa)
Impedance	1 K Ohms
Power Requirements	1.3 - 12V (Standard operating voltage 1.5V)
Termination TAF4	Tini Q 4 Pin Connector

Ordering

Part Number	HW 1500

Headworn Microphone - Lightweight

A lightweight cardioid microphone for use in presentations. Guided Tour systems and tele-sales applications.

Specifications

Microphone	Condenser (Back Electret)
Polar Pattern	Cardioid
Frequency Response	50 Hz - 18 KHz
Sensitivity	-50db @ 1 KHz (0dB=1V/Pa)
Impedance	680 Ohms +/-30%
Power Requirements	1.5 - 9V DC standard operating voltage 1.5V)
Termination TAF4	Tini Q 4 Pin Connector

Ordering

Part Number	HW 1200

Lavalier Cardioid Microphone

Features

- 4 Pin F/Tini Q Connector
- Clothing clip and foam windshield

Specifications

Microphone	Condenser (Back Electret)
Polar Pattern	Cardioid
Frequency Response	100 Hz - 12 KHz
Sensitivity	-50dB @ 1 KHz (0dB=1V/Pa)
Impedance	2.2 K Ohms
Termination	4 Pin Tini Q Connector

Ordering

Part Number	CL 6

Lavalier Omni-Directional Microphone

CLOCKAUDIO

Features

- 4 Pin F/Tini Q Connector
- Tie clip and foam windshield

Specifications

Type	Condenser (Back Electret)
Polar Pattern	Omni-Directional
Frequency Response	50 Hz - 16 KHz
Sensitivity	-44dB @ 1 KHz (0dB=1V/Pa)
Impedance	1 K Ohms
Termination	4 Pin Tini Q Connector

Ordering

Colour	Black	Beige
Part Number	CL 4	CL 4B

Antenna Distribution Amplifier

CLOCKAUDIO

Features

- BNC Inputs and Outputs

Specifications

System FM Carrier	470-870 MHz
Antenna Inputs	2 (BNC)
Antenna Outputs	4 x pairs (BNC)
Output Connector Isolation	24dB
Nominal Cascade Gain	3dB
Inline Antenna Power	12 volts DC 120MA
Power Supply	4 x 12 V DC
Mains Input Voltage	90 - 264 AC 50/60 Hz

Ordering

Part Number	AA 9000

Active Remote Antenna

Specifications

System FM Carrier	470 - 870 MHz
Antenna Gain	1.8 dBi
Booster Gain	0dB +2/-1
Antenna Coverage	360 degrees
Operating Voltage	12 - 18 V DC
Inline Antenna Power	12 volts DC 120MA

Ordering

Part Number	AB 9000

Wireless Accessories (cont.)

Rack Mount & Cover Panel

CLOCKAUDIO

Part Number	Description
RRM9000	Rack Mount for 2 Receivers
RCP9000	Cover Panel for vacant slot (when only 1 receiver mounted)

Intelligent Battery Charging Unit

The CU-2 is a two bay intelligent battery management system / charger for the range of wireless desktop bases.

Features

- Processor controlled
- Built-in Active Monitoring Circuitry
- Pulse Charging System
- Temperature Sensor

Ordering

Part Number	CU-2

Guided Tour Systems

A Licence free system of lightweight 16 channel personal portable units developed for commentary or narration on guided tours for individuals or for groups in situations such as museums, zoos, factories, gardens, or outside events. Also suitable for language tuition, talk back and multi language translation. UHF for reduced interference. 16 PLL selectable channels for easy and reliable operation. Open space range >100m.

Features

- UHF PLL
- 16 Selectable Channels
- Licence Free
- Single or multi receiver capability
- Lightweight portable units with audio level adjustment
- Transmitter with built in condenser microphone for hand held use, and external microphone for use when clipped to a belt or pocket
- Receiver with built in loudspeaker for hand held use, and external ear piece for use when clipped to a belt or pocket
- Powered by two AA Ni-MH rechargeable batteries giving 10-12 hrs use on full charge
- Intelligent chargers for 2, 10, 20 units
- Finished in matt black
- Transmitter (Rack Mountable)
- Hand Held Transmitter
- Belt Pack Transmitter
- Receiver
- Charging Flight Case
- Rechargers (2 unit, 10 unit)
- Tour Guide Accessories
- Neck Lanyard
- Ear Pad Covers

Transmitter (Rack Mountable)

Specifications

CLOCKAUDIO

FM Carrier	UHF PLL Synthesized
Frequency Range	UHF 740-865 MHz (According to local regulations)
Channel Frequencies	6 Pre-Programmed Switchable
Switching Bandwidth	12 MHz
Frequency Stability	+/-0.005%
Maximum Deviation	+/-50 KHz with Level Limiter
Dynamic Range	>80 dB
RF Output	Switchable 10 mW or 50 mW
Antenna	TNC Connector Helical Antenna
Audio Metering	5 LEDs
Audio Inputs	3 Pin XLR - 6.35 Jack Plug - RCA
Audio Outputs	6.35 Jack Plug - 3.5 Jack Plug
Power Supply	External 12V DC 500MA, AC Adaptor 115V - 230V AC
Dimensions	215mm x 220mm x 44mm

Ordering

Part Number	GT 502T

Hand Held Transmitter

Specifications

CLOCKAUDIO

Microphone	Cardioid Dynamic
FM Carrier	UHF PLL Synthesized
Frequency Range	UHF 740-865 MHz (According to local regulations)
Channel Frequencies	16 Pre-Programmed Switchable
Switching Bandwidth	12 MHz
Frequency Stability	+/-0.005%
Maximum Deviation	+/-50 KHz with Level Limiter
Dynamic Range	>80dB
RF Output	10 mW
Antenna	Built In
Battery	2 AA Type NI-MH Rechargeable
Battery Life	10 Hours Alkaline Disposable
Operating Range	100m Open Space
Dimensions	(L) 237mm x Body dia. 35mm x Head dia. 51mm

Ordering

Part Number	GT 402T

Belt Pack Transmitter / Receiver

Specifications

CLOCKAUDIO

	Transmitter	Receiver
FM Carrier	UHF PLL Synthesized	
Frequency Range	UHF 740-865 MHz (According to local regulations)	
Channel Frequencies	16 Pre-Programmed Switchable	
Switching Bandwidth	12 MHz	
Frequency Stability	+/-0.005%	
Maximum Deviations	+/-50 KHz with Level Limiter	
Dynamic Range	>80 dB	
Frequency Response	-	150Hz 10KHz
Sensitivity	-	Variable
THD	-	<1%
Antenna	Helical	
Battery	2 AA Type NI-MH Rechargeable , Battery Life 10 Hours from Full Charge, 16 Hours Alkaline Disposable	
Operating Range	100m Open Space	
Dimensions	92mm x 65mm x 25mm	

Ordering

Type	Transmitter	Receiver
Part Number	GT 300T	GT300R

Charging Flight Case

Specifications

Capacity	20 (Receiver or Transmitter Belt Style only)
Indicator LED	Red Charging, Green Fully Charged
Charging Current	120 mA
Charging Time	NI-MH(1300 mAH) 10 - 12 Hours
Charging Control	PWM (Time Power Off Detector)
Dimensions	640mm x 300mm x 165mm

Ordering

Part Number	DC 320

Recharger in Flight Case

Part Number	Description
GT Set One	9 receivers, 1 transmitter, 10 way recharger in fitted aluminium flight case
GT Set Two	19 receivers, 1 transmitter, 20 way recharger in fitted aluminium flight case

Optional Rechargers

2 unit desktop charger

CLOCKAUDIO

For Hand Held or Belt Style Transmitter / Receiver

Part Number	DC 302

Unit charger in fitted flight case

Part Number	No. of Units
DC 310	10 Unit
DC 320	20 Unit

Hand Held Accessories

Neck Lanyard

CLOCKAUDIO

Support for GT300T & GT300R

Part Number	CL 2NS

Disposable foam ear pad covers

For GTE-10 ear piece

Part Number	GTE-10EP

Audio Guide System

A superb digital pre-programmed audio guide player using MP3 technology offering a high quality audio solution for historic sites, museums and art galleries.

CLOCKAUDIO

Features

- High quality MP3 compression
- Multi language messaging
- 4 hours capacity
- 256mb SD card
- Raised and dotted keypad for the visually impaired
- Built in speaker with headphone stereo jacks
- 10 way charging unit
- USB high speed downloading
- Lightweight
- Hands free operation
- Matt black finish

Audio Guide System (cont.)

AG100 - Specifications

CLOCKAUDIO

Audio Format	MP3 Audio Compression
Frequency	50Hz - 18KHz
Dynamic Range	95dB
Distortion	Less than 0.1%
Loudspeaker	2mw @ 80hms
Audio Output	2 3.5mm stereo jacks
Recording Capacity	256mB or 512mB
Number of Languages	32 max
Number of Messages	950 max
Storage Support	SD card memory
File Format	Fat-12 Fat-16 Fat-32
Data Transfer	USB to SD card
Battery Life	Ni-Mh. 1300mAh rechargable 10hrs typical Alkaline disposable 16 hours typical
Standby Current	Less than 10uA
Current Consumption	Approx 110uA
Dimensions	Length 235mm, Width 59mm, Depth 28mm Weight 180g including batteries

AGC-100 - Specifications

Charging Bays	10
Indicators	Orange charging Green ready, Orange flashing wrong battery
Charging Current	300-350mA per slot
Charging Time	4 - 5 hours
Charging Control	PWM control -Δ V and timer power off detector

AGC-U-100 - Specifications (additional to above)

System Support	Windows 2000/ME/XP
Download Interface	USB 1.1/2
Download Speed	136Kbps @ 100mB
Power Requirements	100-240VAC, 12VDC, 3A switch mode power unit included
Dimensions	Length 55cm, Width 11cm, Depth 9cm, Weight 3.00 Kg

INTERCOM

Communicator Two Way Security Intercom

CLOCKAUDIO

High Quality Speech through Security Windows and Screens

Designed for use in:

- Banks, Building Societies and Post Offices
- Places of public entertainment - Theatres, Cinemas and Sports Grounds
- "At risk" establishments - Garages, All Night Stores, Railway Ticket Offices and Taxis

Also recommended for:

Government Security locations and Local Authority Rent Payment counters etc.

The Clockaudio Communicator Full Duplex Two Way Communication System is purpose designed for use in situations where company staff need to be able to deal efficiently with visitors, whilst at the same time remaining totally secure.

Communicator Two Way Security Intercom (cont.)

CLOCKAUDIO

Communicator has a wide range of applications and is especially ideal for use in areas where money transactions take place, where cash or other valuables are on view or where staff require a higher level than usual of personal safety. Communicator also allows staff to deal in an efficient and friendly way with visitors, without giving them actual access to inner parts of the building where such access may be inappropriate.

Communicator comprises of a range of professionally designed loud-speaker and microphone units, superbly styled to enhance any location. It is powered by a simple to operate, ruggedly built amplifier providing excellent speech clarity.

Staff Speech Unit

Provides two way communication with visitors via a high quality gooseneck microphone and loudspeaker, all housed within a single unit. A staff mute switch also ensures that visitors are unable to hear the operator in confidential conversations.

Part Number	CSU 100

Audio and Induction Loop Amplifier

This the control centre of the Communicator and provides full open duplex communication

Part Number	CA 100

Surface Mount Microphone / Loud Speaker

The visitor enclosure can be used to house either a microphone or loud-speaker for visitors' use. It can be wall or counter top mounted and is well styled although its rugged construction ensures that it is long wearing and vandal resistant.

Part Number	Description
CML 100	Surface Mount Microphone
CLS 100	Loud Speaker

Flush Mount Microphone and Speaker Units

Visitor microphones and loudspeakers can alternatively be positioned in a housing which can be recessed into a wall or counter top, ideal for smoother styling and less intrusive positioning on busy counter tops and for providing additional protection from abuse.

Part Number	Description
CMF 100	Flush Mount Microphone
CLF 100	Flush Moun Loud Speaker

Intercom Accessories

Part Number	Description
CILA 100	Loop pad aerial
CPS 100	Power supply unit, 12 VDC 1.6A in-line

Induction Loop

Portable Induction Loop System

CLOCKAUDIO

Designed as a highly portable free standing system to provide communication for people wearing a hearing aid and the 'T' facility. Suitable for use in a wide range of applications in meeting rooms, customer service counters, receptions and interview areas.

Features

- Portable and easy to carry
- Very quick and simple to set up
- Integral microphone
- External microphone socket
- Microprocessor controlled latest technology for optimum reception of speech and to conserve battery life
- Powered by rechargeable batteries with more than 24 hours use from full charge
- LED indications of speech and battery status
- Plug in Power Adaptor for recharging and continuous use
- Elegant and robust ABS plastic construction

Specifications

Power	Rechargeable 12v internal battery
Battery Life	≥24 Hours
Microphone	Condenser (back electret)
Polar Pattern	Omni Directional
External Microphone Connector	2.5mm jack plug socket
Power Adaptor Connection (12V)	2.1mm jack plug socket
Height	250mm
Width	275mm
Depth	110mm

Ordering

Part Number	CILP-10

Induction Loop Shelf Unit

Shelf unit for Portable Induction Loop System. CLOCKAUDIO

Specifications

Height	206mm
Width	316mm
Depth	152mm

Ordering

Part Number	PLS-10

Induction Loop Accessories

Half-Cardioid mini table top microphone with 3 metre cable to 2.5mm jack plug socket. CLOCKAUDIO

Ordering

Part Number	C 006JP

Accessories

Stands

Shock Absorbing Stand

CLOCKAUDIO

Microphone Shock Absorbing Base for permanent fixing above or below the surface. Supplied complete with Female XLR and conversion adaptor for 3/8" BSW or 10mm screw fittings

Termination	Part Number
3 Pin F XLR	SM 75
5 Pin F XLR	SM 7 X5

Table Microphone Base

Specifications

Base Diameter	120mm
Cavity	The base has a cavity that can be accessed from the bottom via a metal plate secured by three screws. The space available, approx 3" (74mm) x 0.9" (22.5mm), would be suitable for mounting additional electronics.

Ordering

120mm Table Base with M 10 screw thread mounting Hole	PTT or Latching Swith
S120	S120S
S120X	S120XS
S120X-2	S120XS-2
S120X5	S120X5S
S120X5-2	S120X5S-2

Shock Absorbing Table Microphone Stand

Specifications

Height	85mm including microphone holder
Base Diameter	110mm

Ordering

Part Number	SM110

Microphone Boom Stand

Microphone floor stand and boom arm combination. Folding Base for ease of transport. Long legs for added stability.

Specifications

Height	900 - 1605mm / 32mm
Boom Arm Length	840mm

Ordering

Part Number	S 210

Microphone Floor Stand for Wireless Base

A fixed height folding long legged stand with a diecast base for stability and ease of transport. Fitted with a 3 pin XLR connector at the base and the top, the top connector is lockable. Specially designed for use with the CW-9006 UHF transmitter.

Specifications

Height	1023mm

Ordering

Part Number	S 210-X

Stands (cont.)

Desk Stand - S140

CLOCKAUDIO

Microphone stand with fully programmable membrane switch, giving the option between push to talk, push to mute or latching without the need to change dip switches.

Specifications

Switching	Touch Pad Fully Programmable for PTT, PTM & Latching
Indication	Red LED
Input	3Pin Mini XLR (Switchcraft TINI Q) With built in Phantom Power Module
Output	5Pin XLR, Has Remote Switching Ability, Optional 3Pin XLR
Dimensions	Length 120mm, Width 100mm, Height 32mm

Ordering

Part Number	S 140

Desk Stand - S133/S135

Microphone stand with fully programmable membrane switch, giving the option between push to talk, push to mute or latching without the need to change dip switches.

Specifications

Switching	Touch Pad Fully Programmable for PTT, PTM & Latching
Indication	Red LED
Input	3Pin XLR
Output	S133 - 3Pin XLR S135- 5Pin XLR, Has Remote Switching Ability
Dimensions	Length 120mm, Width 100mm, Height 32mm (With XLR: 60mm)

Ordering

Part Number	Description
S133	3Pin XLR
S135	5Pin XLR

Microphone Shock Mounts

Through Table Mic Shock Mount

CLOCKAUDIO

Very low profile through table Microphone Shock Mount with Tini Q Male socket connector and integral Phantom Power Adaptor.

Specifications

Height	4mm above surface
Surface Diameter	29mm
Body Diameter	25mm
Body Length	86mm (3.39") below surface top. Lower 63mm (2.48") with M25 X 1 threaded section to secure. Nut supplied.
Finish	Top - Satin Black / Body - Brass

Impedance	200 Ohms
Power Requirements	9 - 48 volts phantom power
Switchable Bass Filter	-4dB per octave @ 400Hz to -6dB per octave @ 100Hzm
Switchable Pad	-10dB
Termination	Male 3 pin XLR

Ordering

Part Number	SM 20

Microphone Shock Mounts (cont.)

Microphone Shock Mount - SM70

CLOCKAUDIO

Smooth low profile, surface fitting, shock absorbing microphone holder and base.

Specifications

Overall Diameter	74mm
Height Above Surface	10mm)
Body Diameter	51mm
Depth Below Surface	50mm
Finish	Matt Black

Ordering

Part Number	SM 70

Microphone Shock Mount - SM116

Elegant surface fitting microphone shock mount. Made in lightweight, black finished ABS plastic with Female XLR connector centrally mounted on thick shock absorbing rubber cushion.

Specifications

Overall Diameter	116mm
Height Above Surface	18mm
Body Diameter	60mm
Depth Below Surface	25mm
Finish	Matt Black

Ordering

Part Number	SM 116

Table Mounted Microphone Shock Mount

A low profile table mounted Shock Mount fitted with 3 or 5 Pin XLR Female Connector.

Specifications

Height Above Surface	3mm
Diameter	58mm
Body Diameter	51mm
Body Below Surface - XLR version	61mm
Finish	Anodised Black, Silver or Gold

Ordering

Finish	Black	Anodised Silver	Anodised Gold
3 PIN XLR	SM 80 X3	SM 80 X3S	SM 80 X3G
5 PIN XLR	SM 80 X5	SM 80 X5S	SM 80 X5G

Rf Series Shock Mounts & Adaptors

CLOCKAUDIO

The new CLOCKAUDIO RF product series has been developed in direct response to interference (noise) issues which have recently been introduced into microphones, IP phones, hearing aids etc. by popular GSM devices such as PDA's, mobile phones, mobile phones with two way walkie-talkie capability. The noise emitted from these devices can wreak havoc on everything from a simple phone call to a complex video conference, and everything in between. These GSM devices emit a periodic hand shaking "sync signal " to the nearest antenna tower even when these devices are at rest which creates noise, as well as data streaming noise when receiving or making calls, text messaging, sending or receiving e-mails or web surfing.

Depending on the distance of the PDA or mobile device to the antenna tower, these devices will vary their strength in order to ensure proper hand shaking which can result in loud distracting noises which takes the focus away from the real business at hand, YOUR BUSINESS.

CLOCKAUDIO's new " RF Friendly " series of microphones completely strips out these artefacts without any degradation of audio quality, frequency response or sensitivity, and allows you to conduct business as usual without the need to have your conference participants " check your PDA or mobile phone at the door ".

Selectable bass cut filter and pre-attenuation switch facilities are not available on RF Series products. Audio specifications and dimensions for all the microphones remain unchanged, with the exception of the SM20/RF and SM 80-PPA/RF Shock Mounts.

Through Table Mounted Shock Mount

A low profile through table mounted Shock Mount fitted with RF Immune PPA with 3 Pin Tini Q Input Connector and 3 Pin XLR.

Specifications

Height Above Surface	3mm
Diameter	31mm
Body Diameter	20mm
Mounting Hole	23.5mm
Body Below Surface	75mm
Finish	Satin Black
Connectors	Tini Q male socket
Impedance	200 Ohms
Power Requirements	9 - 48 Volts Phantom Power
Termination	Male 3 pin XLR

Ordering

Part Number	SM 20/RF

Through Table Mounted Shock Mount

A low profile through table mounted Shock Mount fitted with RF Immune PPA with 3 Pin Tini Q Input Connector and 3 Pin XLR.

Specifications

Height Above Surface	3mm
Diameter	58mm
Body Diameter	51mm
Body Below Surface XLR version RF version	 61mm 166mm
Finish	Anodised Black, Silver or Gold
Connectors	Tini Q male socket
Impedance	200 Ohms
Power Requirements	9 - 48 Volts Phantom Power
Termination	Male 3 pin XLR

Ordering

Part Number	SM 80-PPA/RF

Phantom Power Supply

CLOCKAUDIO

Designed for use with condenser microphones

Features

- 2 Channel - XLR microphone inputs/outputs
- 48 volt d.c. output
- 20Hz - 20KHz bandwidth
- 600 Ohm fully balanced
- Lightweight
- 100/115/220/240 adjustable AC voltage selector
- LED power on/off indicator
- Dimensions - 7.2" x 5.8" x 2" (180mm x 145mm x 50mm)

Ordering

Part Number	PP-2

Phantom Power Unit

Universal PPA 9-48 volts in an ABS flame re-tardant black box with terminal screw connections. The Unit is designed as an external source of phantom power used to power electret, condenser or boundary microphones. To be placed either in a ceiling or under a table away from the microphone itself.

Specifications

Microphone Connection "PL1"	Screw terminal 1 = Phase + (Hot) Screw terminal 2 = Phase - (Cold)
Output Connection "PL2"	Screw terminal 2 = Phase + (Hot) Screw terminal 3 = Phase - (Cold) Screw terminal 1 = Ground

Ordering

Part Number	CPPW01

Phantom Power Unit - RF Friendly

Phantom power adaptor with RF filter, fitted in a robust aluminum case with terminal screw connections. To be placed either in a ceiling or under a table away from the microphone itself. Ideal for permanent installations.

Specifications

Microphone Connection	Screw terminal (Top) = Phase + (Hot) Screw terminal = Phase - (Cold) Screw terminal = Screen/Shield
Audio Output Connection	Screw terminal (Top) = Phase - (Cold) Screw terminal = Phase + (Hot) Screw terminal = Link to casing

Ordering

Part Number	CPPW01-RF

Phantom Power Adaptor

9 - 48 Volt phantom power adaptor for electret condenser microphones.

Specifications

Power Requirements	9 - 48 Volts phantom power
Switchable Bass Filter	-4dB per octave at 400 Hz to -6dB per octave at 100 Hz
Switchable Pad	-10dB
Impedance	200 Ohms
Termination	Male XLR
Dimensions	19mm dia, 92mm overall length

Ordering

Part Number	PPA

Power Adaptors and Power Supply (cont.)

Phantom Power Adaptor - RF Friendly

9 - 48 Volt phantom power adaptor with RF Filter for electret condenser microphones.

Specifications

Power Requirements	9 - 48 Volts phantom power
Impedance	200 Ohms
Termination	Male XLR
Dimensions	19mm dia, 92mm overall length

Ordering

Part Number	PPA-RF

Belt Pack Power Supply/Power Adaptor

Belt pack 1.5 volt battery supply/9 - 48 volt phantom power adaptor for electret condenser microphones with switched flat response or low roll off. Input termination Tini Q male 3 pin socket and output termination XLR male 3 pin socket. Finished in Satin Black.

Specifications

Power Requirements	1.5 Volt battery (UM3/AA) or 9 - 48 volts Phantom Power
Switch	3 position = off, on flat response, on low roll off
Termination	Input - QG male 3 pin socket, Output - XLR male 3 pin socket
Dimensions	76mm x 64mm x 28mm including belt clip
Finish	Satin Black

Ordering

Part Number	PPM

Line Level Pre Amplifier

The Unit is designed for use with electret condenser microphones and is factory set for 24-volt operation and Line Level Output. This unit can also be used for Phantom Power Operation through the microphone cable. No separate power connections should be made, the red jumpers on the headers "JP1" and "JP2" on the circuit board should be repositioned from "B" to "A", and the resistor R5 changed to 100K.

Specifications

Microphone	Connect Phase + (Hot) to screw terminal 3 on connector "PL2" Connect Phase - (Cold) to screw terminal 4 on connector "PL2"
AC 24v or DC 12-24v	Connect +ve to screw terminal 1 on connector "PL2" Connect -ve to screw terminal 2 on connector "PL2"
Output Connections "PL1"	Screw terminal 3 = Phase + (Hot) Screw terminal 2 = Phase - (Cold) Screw terminal 1 = Ground

Ordering

Part Number	CAP002

Halo / Switch Combinations

Dual Colour Halo Ring and Touch Pad Switch

Comprising a dual-colour Halo ring and switch combination that can be used with all Clockaudio through-table products, the Litetouch allows users to identify easily the status of microphones, as well as mute the units for privacy. With no moving parts, the switch is touch-sensitive, so there are no clicking noises when switching from one status to another. Both the switch and the Halo have been designed to operate remotely with all popular brands of electronic system control, so an integrator has complete freedom to assign function and LED colour. Importantly, the Litetouch can be easily retrofitted to any Clockaudio through-table microphone product.

Features

- Designed for remote switching
- Housing 32 LED's to give all round illumination
- 12 or 24V dc operation
- Current consumption 40mA
- Retro fittable to all Clockaudio through table microphones: C003E-RF/C004E-RF, C011E-RF, C012E-RF, and shock mounts SM10 or SM20-RF
- Fitted with 5 way socket terminal block supplied with fixing screws

Specifications

LED Colour	Red and Green
Operating Voltage	12 or 24V DC (Regulated) * For 24V DC operation a 300ohm 1 Watt resistor must be put in series with both the green and red led wires
Current Consumption	40mA
Dimensions	Height: 5mm, Length: 48mm, Width: 39mm, Hole Diameter: 25mm

Ordering

Part Number	CH32

Microphone Holders and Stand Adaptors

Small swivel microphone holder and stand adaptor with 5/8" - 3/8" female thread. Finished in black plastic to avoid damage and microphone scratching.

Part Number	Suitable For
SA3	600 series hand held microphone
SA5	D500 Series, D 525E / 550E & C 650E
SA8	C 850E shotgun

SA3

SA5

Intercom Systems and Accessories

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Digital Intercom System - 129

BASIC SERIES

Basic series

The Basic Series offers a cost effective solution for smaller networks where full duplex, party-line communication is required. The interconnect system is based on a standard, balanced mic cable with XLR-3 connectors. The installation requires no expert knowledge and the superior control layout allows comfortable operation.

Features

- The switch mode power supply is designed to safely drive fifteen BS15 beltpacks, when each is driven to full volume.
- TALK and CALL Buttons & LEDs
- Volume Control (Listen Level)
- Aux Input volume control for each channel

Dual Channel Master Station

The BS216 is a duel channel station intercom station with built-in, switch mode power supply and AUX input for program signals. It is housed in a 19" steel case and provides all the features necessary for a two channel communication system, in conjunction with BS 15 beltpacks.

Part Number	BS 216

Single Channel Beltpack

The BS 15 is a portable 1-channel intercom station, housed in a strong ABS case and provided with a belt clip. The unit is powered via the intercom line by a BS 216 master station or a BS 181 / BS 286 power supply.

Part Number	BS 15

Single Channel Power Supply

The BS 181 is a 1-channel, switch mode power supply in a steel case. It is capable of safely driving fifteen BS15 beltpacks, when each is driven to full volume. It provides all the features necessary for a simple communication system based on BS 15 beltpacks.

Part Number	BS 181

Dual Channel Separate Power Supply

The BS 286 is a 2-channel switch mode power supply with AUX input for program signals. It is housed in a 19"/1U steel case and is designed to be able to safely drive fifteen beltpacks BS 15, when each is driven to full volume.

Part Number	BS 286

The Basic Series products are also available as pre-packed intercom systems.

Part Number	BS 216	BS 181	BS 15	HS-1/D	HS-2/D
Talkpack 1		1	2		
Talkpack 2		1	2		2
Talkpack 2-1		1	2	2	
Talkpack 3	1		2		

PRO SERIES

Pro series

The PRO series of Intercom Products offers a complete and professional solution for any size of network where a full duplex party-line communication system is required. The interconnect system is based on a standard, balanced mic cable with XLR-3 connectors. The installation requires no expert knowledge and the superior control layout allows comfortable operation.

High power push-pull headphone amplifiers provide an extensive dynamic range of 80dB over a frequency range of 200Hz to 15kHz. Proprietary frequency contouring circuitry ensures high intelligibility for voice communications. A current driven interconnect loop ensures operator listening levels do not change as stations are added or removed from the network.

Pro Series Beltpacks

This series of three beltpacks are single or dual channel portable intercom stations housed in a strong aluminum case with a sprung metal belt clip. They are powered via the intercom party line from a PRO Series master station or separate power supply unit. All electronic circuitry is based on surface mount technology, offering maximum durability and ease of technical service.

Features

- TALK and CALL Buttons
- Headset Volume Control
- Mic Mute (Each beltpack is provided with a mic mute circuit, allowing a push button on PRO Series master stations or power supplies to mute the headset microphone.
- Program Input (PS 19A,PS 19AM)
- Binaural Headset Connector (PS 19A M, PS 29 M and PS 29 only) Optional

With Metal Case

Part Number	Description	
PS 19 AM	Single Channel Beltpack With Program Input In Metal Case	
PS 29M	Dual Channel Beltpack In Metal Case	
PS 19M	Single Channel Beltpack In Metal Case	

This series of three beltpacks are single or dual channel portable intercom stations housed in a strong ABS case with a sprung metal belt clip.
The operational features are the same as at the beltpacks in metal case.
For all electronic circuitry, conventional (not surface mount) parts are used.

With ABS Case

Part Number	Description	
PS 19	Single Channel Beltpack In ABS Case	
PS 19A	Single Channel Beltpack With Program Input In ABS Case	
PS 29	Dual Channel Beltpack In ABS Case	

Intercom Stations

The PS 279 is a 2-channel intercom station with a built-in power supply, housed in a 19"/1U metal case. It provides all the features necessary for a two channel communication system, in conjunction with the PRO Series beltpacks and speaker stations.

Features

- The built-in power supply drives 20 beltpacks or 10 dual channel speaker stations, or a combination of the two.
- DC Input
- Talk and Call Functions
- Volume Control
- Mic Mute Push Button
- Binaural Headset Connector (optional)
- Buzzer Mute
- AUX / Program Input
- System Link
- Ground Lift on AUX Input

Part Number	Description
PS 279	Dual Channel Master Station

Loudspeaker Stations with Built In Power Supply

This series of speaker stations with a built in power supply provide four or six channel table top intercom stations, fitted with an electret 'noise cancelling' gooseneck microphone and loudspeaker. The models with suffix 'RM' are identical except the gooseneck microphone is replaced by a small built-in electret microphone. For each type of speaker station, a kit is available for 19" rack mounting (2U).

Features

- The power supply of the PS 4379 drives 40 beltpacks or 20 speaker stations. The power supply of the PS 6379 drives 60 beltpacks or 30 speaker stations.
- DC Input
- Talk And Call Functions (Talk to all & Call to all)
- Mic Mute (For Each Channel)
- Buzzer Mute (For Each Channel)
- Volume Control (For Each Channel)
- Stage Announce
- IFB
- AUX Input
- Program Input
- System Link
- Extended Station Function
- Near Station Function
- Ground Lift On AUX
- Program And Ifb Input
- Binaural Headset Connector (Optional)

Part Number	Description	
PS 4379	Four Channel Speaker Master Station	
PS 6379	Six Channel Speaker Master Station	

Pro series (cont.)

Speaker Stations

This series of speaker stations provide single, dual, four or six channel table top intercom stations, fitted with an electret 'noise cancelling' gooseneck microphone and loudspeaker. The models with suffix 'RM' are identical except the gooseneck microphone is replaced with a small built-in electret microphone. For each type of speaker station, a kit is available for 19" rack mounting (2U).
The speaker stations are powered via the intercom party line from a PRO Series master station or Power Supply.

Features

- Headsets with dynamic or electret microphones can be connected as standard. Mic gain for gooseneck and headset mics can be adjusted internally.
- Talk and Call Functions
- Binaural Headset Connector (Option 230/430/630)
- Channel on/off function (PS 630 only)
- MIC Mute (Through PSU or Master Stations)
- Buzzer Mute (Through PSU or Master Stations)
- Volume Control (for each channel)
- Master Volume Control (PS430/630

Part Number	Description	
PS 130	Single Channel Speaker Station	
PS 430	Four Channel Speaker Station	
PS 230	Dual Channel Speaker Station	
PS 630	Six Channel Speaker Station	

Power Supply

Dual Channel Power Supply

The PS 289 is a dual channel power supply in a 19"/1U metal case.
It provides all the features necessary for a 2-channel communication system in conjunction with the PRO series beltpacks and speaker stations.

Features

- Drives 20 beltpacks or 10 Speaker Stations
- DC Input
- MIC Mute
- BUZZER Mute
- SYSTEM LINK
- AUX Input
- GROUND LIFT switch for AUX Input

Part Number	PS289

Dual Channel Booster Power Supply

The PS 285 is designed for use as an auxiliary 2-channel power supply unit, should the main power supply of an intercom network be insufficient to drive the required number of stations. The unit has to be placed in a network in such a way that it feeds its own group of user stations.

Features

- Drives 20 beltpacks or 10 speaker stations
- Remote controlled Standby Mode

Part Number	PS285

Six Channel Power Supply

The PS 680 is a six channel power supply in a 19"/1U metal case. It provides all the features necessary for a 6-channel communication system in conjunction with the PRO Series beltpacks and speaker stations.

Features

- Drives 40 beltpacks or 20 Speaker Stations
- Remote Mic/Buzzer Mute A 25 pin sub-D connector on the rear panel allows the user to connect a switchbox with push buttons for remotely muting the mics or buzzers for each channel separately.
- MIC MUTE
- 2 AUX INPUTS
- BUZZER MUTE
- AUX MATRIX

Part Number	680

Dual Channel 4-Wire Audio Interface

The PS 260/T is designed to interface an ASL intercom system to external audio equipment or to a 4-wire intercom system. This allows fixed 4-wire systems to be temporarily extended with ASL intercom stations, or a 4-wire TV camera intercom can be connected directly onto an ASL network. Other applications for the PS 260 might be the injection of external audio signals into ASL intercom lines or monitoring of the intercom signals by recorders or paging systems.

Part Number	PS260/T

Single Channel Telephone Interface

The PS 150 is designed to interface an ASL intercom system to a telephone or 2-wire system and is used to allow communication between an ASL intercom network and a standard telephone, or between two ASL intercom networks via a telephone line.

Part Number	PS150

Wireless Interface

The ASL PS 155 is designed to be a tabletop, single channel audio interface between simplex wireless intercom systems and ASL partyline intercom systems. Special attention has been paid to the ease of operation by the user, enabling everybody to expand their intercom system with a reliable and locally approved wireless intercom section.

Part Number	PS155

WIRELESS SERIES

Wireless Series

The ASL wireless intercom system consists of single and dual channel wireless beltpacks and base stations for 2 or 4 wireless connections. Special attention has been paid to the ease of operation, enabling the user to expand his wired intercom system with a reliable and fully featured, wireless intercom section. The system is based on the global license exempt frequency of 2.4 GHz. Within the available band, ASL managed to establish a maximum of 8 wireless full duplex intercom connections. Each connection can be made with a single channel or a dual channel wireless beltpack. Due to the audio frequency range of 100Hz - 12KHz the system is very comfortable to use for longer periods of time with an extremely high intelligibility of speech.

Features

- Volume control
- TALK and CALL functions
- MIX Control (WS 29 only)
- Allows the user to listen to either Channel A, Cannel B and to both Channels at any required balance.
- MIC mute circuit
- BUZZER mute circuit

General HF Specifications

Frequency range: 2.4 - 2.483 GHz
Channel bandwidth: 7 MHz
No of full duplex RF connections: 8
TX output power: 12 dBm
Receive Sensitivity : -91 dBm
Audio sample rate : 24 ksps
Audio quality : 16 bitsTX output power : 12 dBm

Part Number	Description	
WS 400	Four Channel Wireless Base Station	
WS 200	Two Channel Wireless Base Station	

Base stations WS 200 and WS 400 (19", 1U)

For full duplex connections, the WS 200 contains 2 send/receive units and the WS 400 contains 4 send/receive units. A maximum of 8 full duplex connections at one location is possible, by connecting 2x WS 400 or 4x WS 200.

Interfacing to wired intercom

With switches on the rear panel of the base station, each send/receive unit may be routed to either the built-in two channel (A and B) partyline interface, or to 4-wire intercom systems. Input and output volumes can be adjusted by trimmers at the rear of the base station.

Part Number	Description	
WS 29	Dual Channel Wireless Beltpack	
WS 19	Single Channel Wireless Beltpack	

Accessories

Part Number	Description	
IS 011/ IS011A/ IS011B	Wall Boxes for intercom lines. Surface or flush mounting.	
IS 026	Intercom line split box, two XLR-3 female into six XLR-3 male connectors.	
IS 011D	Wall Box for six intercom lines and two general purpose audio lines (tie lines), with twelve XLR-3 male connectors and two XLR-3 female connectors. The Box incorporates a three 8-pair multi-cable link system.	
IS 140	Sound & Light CALL beacon, selectable high volume buzzer with volume control and/or large flashing lamp.	
IS 640/12	Matrix switch, assigns 12 intercom lines to 6 intercom channels (19"/1U). Units can easily be interconnected by a flat cable allowing the user to extend the number of intercom lines indefinitely.	
IS 640/18	Matrix switch, assigns 18 intercom lines to 6 intercom channels 19"/1U). Units can easily be interconnected by a flat cable allowing the user to extend the number of intercom lines indefinitely.	
IS 03	Intercom handset with 'push-to-talk' switch, spiral cable and XLR-4 connector.	
IS 02	Headset extension cable with XLR-4 connectors, 3 m.	
IS 01	Extension spiral cable with XLR-3 connectors, up to 3.5 m.	
HS1/D - HS2/D	Light weight, half open headsets. Double or single muff with dynamic microphone, cable and XLR-4 connector.	
HR-2/E	Double muff, closed headset with noise canceling electret microphone (left or right-side use), cable and XLR-4 connector.	

Master Matrix

The DS 4000 M Master Matrix is the centerpiece of the new ASL Digital Intercom system. These units connect up to 40 users in either star or daisy chain topology over category 5 cable. Six matrix units can be linked together to support up to 240 users. Users connect via 8, 16, 24 or 32 channel speaker stations (with 20 channel extension panels if needed) or 2-channel digital beltpacks. The system is configured with the ConfigurIT software providing the user an easy to use GUI. The system utilises digital audio throughout, supports person to person communication by voice or text messaging, as well as party line communication with up to 256 user groups possible.

Features

- One unit supports systems for up to 40 users
- Up to 240 users by linking six matrix units
- Five users strings (up to 8 users each)configurable as star, line or daisy-chain
- Front-panel USB and RJ-45 connectors
- Dual switch-mode power supplies for redundancy
- LED indicators for String On and Overload
- Rear panel Ethernet, VGA, USB (2) and GPIO (8) connections
- Optional copper or fiber optic link connectors
- 2 Interface slots (for interface plug-ins)
- Available DS 4000 S Slave unit(s)

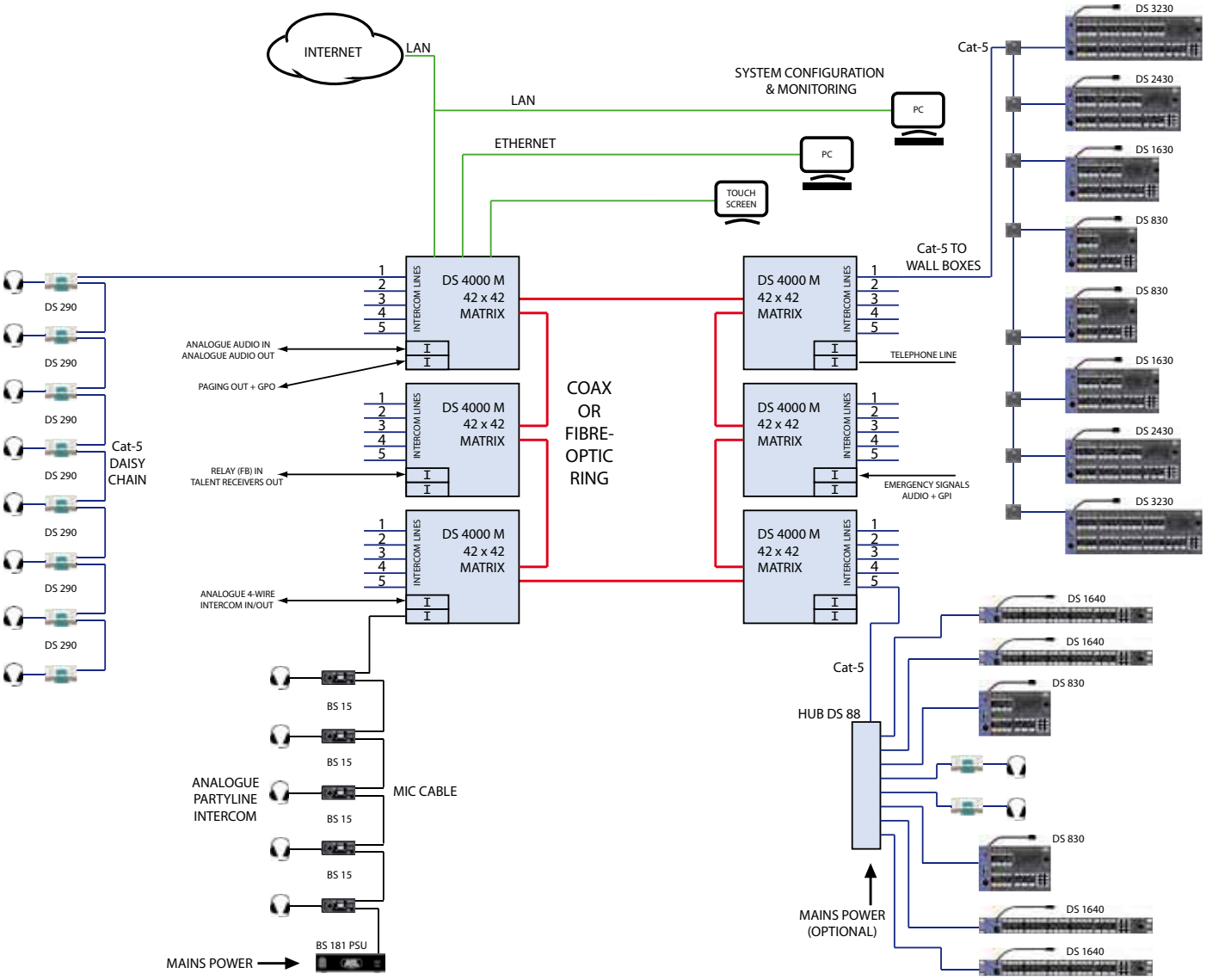
System Components

System components listed below allow for the design and configuration of ASL Digital Intercom systems for a broad range of applications, including live event and broadcast production as well as commercial and industrial uses.

Part Number	Description
DS 4000 M	Master Matrix Unit (19"/1U)
DS 4000 S S	lave Matrix Unit (19"/1U)
DS 290	2-ch Intercom Beltpack
DS 830	8-ch Speaker Station, 3U tabletop, locally powered (19" flares optional)
DS 1630	16-ch Speaker Station, 3U tabletop, locally powered (19" flares optional)
DS 2430	24-ch Speaker Station, 3U tabletop, locally powered (19" flares optional)
DS 3230	32-ch Speaker Station, 3U tabletop, locally powered (19"flares optional)
DS 1640	16-ch Speaker Station (19"/1U), locally powered
DS 2040 E	20-ch Extension Panel (19"/1U) for DS 1640
DS 52	Coax Matrix Link (plug-in)
DS 53	Fiber Optic Matrix Link (plug-in)
DS 55	Touch screen (17")
DS 71	Partyline Interface
DS 72	4-wire Interface
DS 73	Analog Audio In/Out Interface
DS 74	Paging Interface (to analog third party PA systems)
DS 75	IFB interface (to analog talent receivers)
DS 77 T	Telephone Interface
DS 79	Emercency Interface
DS 80	Wallbox
DS 85	Booster Power Supply
DS 88	8-outlet HUB
DS 88 P	8-outlet HUB, locally powered
DS 230	2–channel Speaker Station
DS 430	4-channel Speaker Station

Typical ASL Digital Intercom System

The system illustrated here is a 252 x 252 matrix accommodating up to 240 user stations plus 12 interfaces inside the DS 4000 M units. Additional interfaces may be incorporated by connecting a separate external 19" rack-mount interface frame to the intercom lines. Each external interface module occupies one user station position.



Tools and Test Equipment

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Test Equipment - 138

LAN / Voice System Installation Tools - 139

Coaxial Cable Strippers

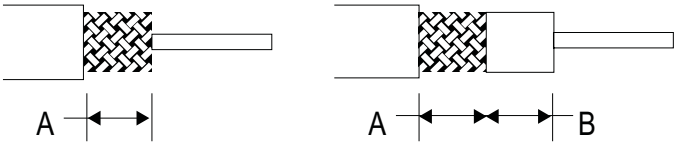
CST Series

Paladin Tools

CST Series coaxial strippers are designed for the professional and they are the standard for the broadcast industry. The CST is a fixed-blade system that accommodates .1"-.315" (2.5-8.0 mm) cable diameters including RG58, 59,62AU, RG6 & 6 Quad, RG174, Belden 1505A, 1855A, & 8281.

Advantages

- Cam adjustment rather than spring-load ensures precise hold on cable
- Memory blocks reduce set-up time & are easy to interchange and mark for various cable types -only make one adjustment
- Blades are two-sided for long life
- No cable jacket distortion during stripping process
- Blades cassettes interchange easily



Type	Colour	Tool and Cassette Part No.	Replacement Cassette Part No.	Strip Distances
2-level coaxial cable stripper for CATV "F" type connectors	Blue	1241	2241	A=.256"
2-level coaxial cable stripper	Yellow	1242	2242	A=.472"
3-level coaxial cable stripper	Brown	1243	2243	A=.295", B=.137"
2-level coaxial cable stripper	Red	1244	2244	A=.236"
2-level coaxial cable stripper	Gray	1246	2246	A=.153"
3-level coaxial cable stripper for Kings and Amphenol BNC connectors	Orange	1247	2247	A=.327", B=.146"
3-level coaxial cable stripper for ADC and Amphenol HDTV BNC connectors	Black	1248	2248	A=.344", B=.094"
3-level coaxial cable strip for common 2- and 3-piece connectors	Green	1240	2240	A=.279" and B=.201"

KINGS

Suitable Cable	Part Number
Fixed settings for Belden 179DT Cable	KTS-8-1
Adjustable settings for various cables	KTS-8-2

Termination Tooling

The following tools will assist with termination of White Sands Connector products .

White Sands

Description	Part Number
Strip tool, ¼ x ¼ for Fixed Pin and compression connectors	CPT7538
Replacement cartridge for CPT-7538 above	RBC7538
Strip tool, ¼ x 1/8 for MCX, 1.0/2.3 & SMZ types	CPT7538125
Replacement cartridge for CPT-7538125	RBC7538125
Economy strip tool with cartridges for mini RG59, RG59 and RG6	STM596
Crimp tool, 0 .270 die for Fixed Pin connectors	ACT270
Crimp tool, 0 .213 & .270 for Fixed Pin connectors	ACT483
Compression tool, suits BNC, "F" and RCA type compression connectors	CTFBR
Professional Compression tool, suits BNC, "F" and RCA type compression connectors	PT5500

CPT7538 ACT270

Crimp Tools

1300 Series

Paladin Tools

The original interchangeable-die crimping system – all the rest are mere copies of the Paladin innovation. It continues to be the answer for precision-crimping at an affordable price with 5 die sets available.

Features

- Fully-ratcheting cycle with built-in safety release
- Interchangeable dies sets made from heat treated steel for longer use
- Easy to use and maintain
- Available as complete tool with die inserted or separate tool frame and individual die sets
- Foam-lined case or soft zipper case available to hold tool and assorted dies together

Advantages

- EZI-Change (TM) die screws make changing dies quick & easy
- Most precise and tightest tolerances on die sets in the industry
- Six ratchet gear settings for optimum crimp performance

CrimpAll® 8000 Series

Paladin Tools

The 8000 Series CrimpAll® was designed with user satisfaction in mind. This world-class crimp tool is designed for superior comfort and ease of use. It is exceptional value and uses the same die sets as our 1300 Series.

Features

- Ultra-smooth, fully ratcheting crimp cycle with built-in safety release
- Interchangeable die sets of heat-treated steel for long life
- Soft, rubber imbedded handles
- Long lasting tool that delivers over 50,000 crimp cycles
- Rugged, double-plated jaw design to increase life span
- 10-year warranty

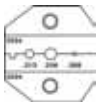
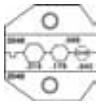
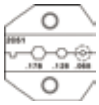
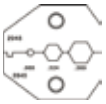
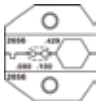
Advantages

- Angled head to prevent awkward wrist bending during operation
- Reduced handle grip distance makes it easy for both small and large hands
- Higher crimp force produced with less hand force so hand doesn't tire as quickly
- No breakover hand-forces – the effect required by most crimpers to make the last click at the end of the cycle to complete the crimp – the CrimpAll ® does all the work!

Crimp Tools (cont.)

Die Sets – CrimpAll ® 8000 & 1300 Series

Paladin Tools

Part Number	Description	Connector Type(s)	Crimp Sizes /Type	
2034	RG58/ Die for CrimpAll ® 8000 /1300 Series	RG58, RG59, RG62AU	.256/.213 /.068" HEX	
2648	HDTV Die - CrimpAll ® 8000 /1300 Series	RG174, RG59/62, mini-coaxial & Belden 1855A	.255/.197/ .178/.068" HEX & .042 SQ	
2649	HDTV Die for CrimpAll ® 8000 /1300 Series Crimpers	RG59, RG6, Belden 8281, 1694A & 1505A	.324/.255/ .068" HEX & .052/.042" SQ	
2657	HDTV Die set for CrimpAll ® 8000 /1300 Series Crimpers	RG6, Belden 1694 & 1694A	.278/.275 /.068" HEX & .042" SQ	
2653	SMA, SMB BNC/TNC Die for CrimpAll ® 8000 & 1300 Series	RG58, Mini-59, RG174, small coax & Belden 1855A	.128/.213/. 197/.178/. 068" HEX & .042" SQ	
2046	Thinnet, BNC & Mini-UHF Die for CrimpAll ® 8000 /1300 Series Crimpers	50 & 75 ohm small 2-& 3-piece BNC/TNC	.213/.178 /.068" HEX & .042" SQ	
2047	BNC/TNC & Mini-UHF Die for CrimpAll ® 8000 /1300 Series Crimpers	RG59, RG62, Belden 8281 & 1505A	.315/.252 /.068" HEX & .042" SQ	
2051	RG174, RG179 Die for CrimpAll ® 8000 /1300 Series Crimpers	RG174, RG179 & small cable coax	.178/.128 /.068" HEX	
2075	Teflon/Plenum Die for CrimpAll ® 8000 /1300 Series Crimpers	RG58, RG59, RG62AU, RG6 Teflon/ Plenum	.325/.215 /.065" HEX	
2076	RG6 & RG58 Die for CrimpAll ® 8000 /1300 Series Crimpers	RG6, RG58	.320/.210 /.185" HEX	
2082	Belden 1694A & 1695A Die for CrimpAll ® 8000 /1300 Series Crimpers	Belden 1694A & 1695A	.315/.068" HEX	
2045	RG6, RG6 Quad Die, CrimpAll ® 8000 /1300 Series	RG6, RG6 Quad, Belden 1694A	.360/.324 /.068" HEX	
2042	RG59/RG6 CATV Die- CrimpAll ® 8000 /1300 Series	RG59, RG6 video cable	.346/.319 /.256" HEX	
2656	RG8/11/213 - CrimpAll ® 8000 /1300 Series Crimper	RG8, RG11, RG213	.429/.100 /.080" HEX	
2039	RG8/11/213/216 Die, CrimpAll ® 8000 /1300 Series Crimper	RG8, RG11, RG213, RG216	.415/.095" HEX	
2050	RG8/RG213 Die, CrimpAll ® 8000 /1300 Series Crimper	RG8, RG213	.402/.094 /.079" HEX	
2699	Universal HDTV die for CrimpAll ® 8000 /1300 Series Crimper	Belden 1855A, 1865A, 1505A, 1505F, 1694A, 1694F	.278/.255 /.178/.041 HEX	

1600 Series

Paladin Tools

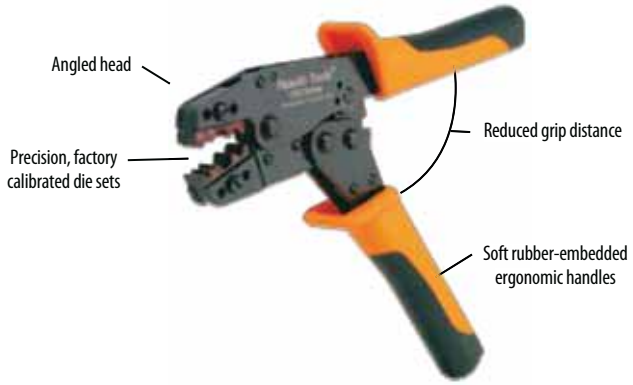
The 1600 Series is Paladin's premium crimper family designed for the professional that demands superior quality & reliability. It is the most widely used tool amongst broadcast engineers and professional cable assembly companies. It supports more fibre optic, HDTV, industrial & electrical applications than the larger, more expensive tools.

Features

- Precision-calibrated crimp profiles
- Finest-quality tool steel
- Long-lasting tool that delivers over 75,000 crimp cycles
- Ultra-smooth, advanced ratcheting system with built-in safety release
- Rugged, double-plated jaw design for increased life span
- Lifetime warranty

Advantages

- Smallest grip hand tool on the market with the longest life span available
- True ergonomic rubber handles that are soft & won't quickly wear out or break
- Lowest hand-force of the long-life crimp tools on the market
- without compromising superior crimp force
- No breakover hand force - the effort required by most crimpers to make the last click at the end of the cycle to complete the crimp - the tool does the work, not the brute force of your hand
- Interchangeable die sets for coax, fibre optics and wire ferrules



Part Number	Description
1600	Crimp tool frame
1600.9	Replacement handles
2307	Thumb Screw (2)

1600 Series tool complete with 2683 die

Suits all popular Belden and Roadworx coax cables with Kings and Amphenol BNC/RCA Plugs

Part Number	1669

Crimp Tools (cont.)

Coax Die Sets for 1600

Paladin Tools

	Part Number	Connector Type(s)	Cable Types(s)	Crimp Sizes/Type	Connector Manuf.
	2660	BNC/TNC 3-Piece HDTV	Belden 8281 and 7505	0.324"/0.068" HEX and 0.042" SQ	Kings, ADC, S witchcraft, Amphenol HDTV
	2661	BNC/TNC 3-Piece HDTV	RG59, Belden 1505 and 8241	0.255"/0.068" HEX and 0.042" SQ	Kings, ADC, Switchcraft, Amphenol HDTV
	2662	BNC/TNC 3-Piece HDTV	RG6, Belden 1694A and 1855A	0.275"/0.178" HEX and 0.042" SQ	ADC, GEM, Trompeter HDTV
	2663	BNC/TNC 3-Piece HDTV	NT735, Belden 1694A and 1855A	0.278"/0.197" HEX and 0.042" SQ	ADC HDTV
	2006	BNC/TNC	RG174 and other small cable	0.178"/0.068" HEX	Crimp pins, fer-rules and sleeve
	2005	BNC/TNC	RG58/59/62 AU	0.255"/0.213" /0.068" HEX	Crimp pins, ferrules and sleeve
	2019	BNC/TNC	RG59/62 AU and Belden 8281	0.324"/0.255" 0.068" HEX	Crimp pins, ferrules and sleeve
	2683	BNC/TNC 3-Piece HDTV	Belden 1855A, 1865A, 1505A, 1505F, 1694A, 1694F, 179DT	0.278"/0.255" 0.178"/0.041" HEX	Kings, ADC, B&L, Trompeter, Amphenol, Switchcraft

Fibre Die Sets for 1600

	Part Number	Description	Crimp Sizes/Type	Connector Manuf.
	2664	SMA/SMB/FC/ BICONIC Fibre	0.213" / 0.178" / 0.151" HEX 5.41 / 4.52 / 3.83 mm	SMA/SMB/BICONIC/ FC/SC/ST Fibre

Note: For cross reference of crimp and strip tools to cable and connectors, please see Section 2, pages 48 to 50.

KTH-1000

KINGS

Features

- Interchangeable Dies
- Die set not included but are purchased separately
- Ratchet type tool
- Does not release until crimp is complete
- Frame made of heavy duty lightweight aluminium
- Ratchet release feature tool type

Part Number	KTH-1000

Crimp Tools (cont.)

Die sets for KTH-1000

KINGS

The die sets below are popular die sizes for the KTH-1000, to suit Kings and Amphenol BNC connectors.

Part Number	Crimp Sizes (in inches)			
	A	B	C	D
KTH-2001	0.069		0.213	
KTH-2002	0.069	0.100	0.255	0.400
KTH-2003	0.100		0.255	
KTH-2004	0.100		0.429	
KTH-2005	0.100		0.324	
KTH-2007	0.069		0.178	
KTH-2008	0.069		0.105	
KTH-2009			0.475	
KTH-2010	0.069		0.324	
KTH-2025	0.042		0.178	
KTH-2119	0.043		0.324	
KTH-2255	0.420		0.275	
KTH-2258	0.042		0.128	
KTH-2261	0.042		0.255	

KTH-5000

Features

- Economical and user-friendly alternative to other industrial crimping tools
- Lightweight, ergonomic tool allows for one-handed operation
- Ultra-smooth ratchet design with rubber grip handles
- Available dies developed specifically for precise crimping of Kings connectors

Part Number	KTH-5000

Die sets for KTH-5000

Part Number	Crimp Sizes (in inches)			
	A	B	C	D
KTH-5001	0.041	0.178	0.128	0.192
KTH-5002	0.042	0.052	0.068	0.32
KTH-5003	0.041	0.068	0.178	0.278
KTH-5004	0.080	0.100	0.429	-

KTH-8000

Features

- Linear motion crimping tool accommodating hex dies
- Ratchet release feature type tool
- Optimised guide system for perfect positioning
- Frame made of heavy duty light weight metal with soft handles for non- slip grip comfort

Part Number	KTH-8000

Die sets for KTH-8000

Part Number	Crimp Sizes (in inches)		
	A	B	C
KTH-8001	0.071	0.255	0.374
KTH-8002	0.071	0.429	0.528

Flaring Tools

Paladin Tools

Features

- 4.5" overall length, chrome finish
- Flare the braid of the coax cables to make the cable insertion into the connector much easier

Description	Part Number
RG59 CATV	1909
RG6/6 QS CATV Flaring & Insertion Tool	1910

1910

Features

- Works on RG59 and RG6/6 Quad cable
- Flares shield away from center dielectric
- Saves time on CATV and satellite installations

Description	Part Number
RG59/RG6/RG6 Quad Flaring Tool	1917

BNC Extraction Tools

Paladin Tools

Use this tool for the easy insertion and removal of coaxial BNC connectors for high-density patch panels.

Features

- Chrome finish
- Comfortable driver-style plastic handle

Shaft Length	Part Number
8" (203mm)	1907
12" (305mm)	1916

1916

1907

CATV "F" Type Extraction Tool

Paladin Tools

Use this tool for the easy insertion and removal of coaxial CATV "F" connectors for high-density patch panels.

Features

- Chrome finish
- Comfortable driver-style plastic handle
- Combination tool - use the hex socket to easily remove and insert the connectors. Use the threaded end to hold the connector while you insert cable for twist-on connectors. Helps to prevent finger injuries.

Shaft Length	Part Number
8" - 2" (203mm - 305mm)	1908

Patch Bay Tools

The following tools will assist with installation and termination of Bittree Patching systems

Bittree

Description	Part Number
EPIN Crimp Tool	K2MA-01
EPIN Removal Tool	06-1877-04
EPIN Insertion Tool	06-1742-04
BNC Removal Tool, 6"	RT1S
BNC Removal Tool, 12"	RT1L
BNC Removal Tool, 22"	RTXL
BNC Mini-Weco Removal Tool, 12"	RTR1L
PunchDown Tool for ID Rear Interface	PT1LA

K2MA-01

RTXL

06-1877-04

06-1742-042

Cable Cutters

KT8 and KT12

Paladin Tools

Precise and professional cutters for solid, stranded and flexible cables up to AWG 6 (16 mm2) (KT 8) and AWG 2 (35 mm2) (KT 12).

Features

- Blades outlined for two conductor size ranges
- Precise and effortless cuts
- Hand-stops prevent slips
- No screw design to ensure precise attachment
- Textured handles
- Blades can be sharpened with a round file
- Not for use on steel, aluminium alloys or hard-drawn copper cables
- Perfect cutter for coax and UTP cables; doesn't deform cable
- Lifetime warranty

Max. cable cutting capacity	KT 8 *	KT 12 *
Copper		
Solid	AWG 6 (16mm2)	AWG 6 (16mm2)
Stranded	AWG 6 (16mm2)	AWG 6 (25mm2)
Flexible	AWG 6 (16mm2)	AWG 6 (35mm2)
Aluminium		
Stranded	AWG 6 (16mm2)	AWG 6 (16mm2)
Technical		
Weight	6.3 oz. (180g)	10.5 oz. (300g)
Length	6.5" (165mm)	8.47" (215mm)
Part Number	900265	900266

* Do not use on live circuits

Blades designed so cable stays round

Utility Cable Cutter

Utility cable cutter for solid, stranded and flexible cable up to AWG 2/0 (70mm2)

Paladin Tools

Features

- Optimal blade geometry for low cutting force
- Not for use on steel, aluminium alloys or hard-drawn copper cables
- One-year warranty

Maximum cable cutting	
Copper	
Solid	AWG 6 (16mm^2)
Stranded	AWG 2 (35mm^2)
Flexible	AWG 2/0 (70mm^2)
Aluminium	
Stranded	AWG 2/0 (70mm^2)
Technical	
Weight	16 oz. (453g)
Length	9.4" (240mm)
Part Number	1817.1

* Do not use on live circuits

Tool Kits

1600 Broadcast Pack

1600 Series professional crimp tool and five coax die sets in a rugged nylon pack with outer holster and strap for belt or wrist. Contains the following tools for the broadcast installer:

Paladin Tools

Description	Part Number
Paladin 1600 Broadcast pack	4601
Paladin 1600 pack (frame & case only)	4600

Kit Contains

Description	Part Number
1600 Series Professional Crimp Frame	1600
Die Sets:	
BNC/TNC - RG58/59 & other small cable	2005
BNC/TNC HDTV - Belden 8281 & 7505	2660
BNC/TNC HDTV - RG59, & Belden 1505 & 1855A	2661
BNC/TNC HDTV - RG6, & Belden 1694A & 1855A	2662
BNC/TNC HDTV - Belden 1694A & 8281 & NT735	2663

BroadcastReady™ Kit

The BroadcastReady™ Kit includes professional tools for cutting, stripping, crimping and testing coaxial cable connections for HDTV, video and RF communications. Protected by a padded, zipper case, BroadcastReady contains:

Paladin Tools

Description	Part Number
BroadcastReady™ Kit	901083

Kit Contains

Description	Part Number
KT8 round cable cutter	900265
CST stripper frame with blades	1250
CST GRN - common connectors	2240
CST ORG - Kings & Amphenol 3-piece	2247
CST BK - ADC, Amphenol HDTV	2248
1600 Series Professional Crimp Frame	1600
Die Sets:	
BNC/TNC - RG174 & other small cable	2003
BNC/TNC - RG58/59 & other small cable	2005
BNC/TNC HDTV - Belden 8281 & 7505	2660
BNC/TNC HDTV - RG59, & Belden 1505 & 1855A	2661
BNC/TNC HDTV - RG6, & Belden 1694A & 1855A	2662
BNC/TNC HDTV - Belden 1694A & 8281 & NT735	2663
Coax-Check® Remote tester	1565

CoaxReady™ Deluxe Kit

Perfect for LAN/Ethernet or video & CATV installation. For a wide variety of coaxial connectors includingmini-coax and HDTV applications, CoaxReady™ Deluxe conbines our most popular tools for a complete coax solution in a handy zipper case. This kit includes:

Paladin Tools

Description	Part Number
CoaxReady™ Deluxe Kit	901081

Kit Contains

Description	Part Number
KT8 round cable cutter	900265
LC CST-58/59 coax stripper	1255
1300 crimp tool frame with EZI-CHANGE™ thumb screws	1302
Die Sets:	
BNC/TNC - RG58/59/62 AU	2034
BNC/TNC - CATV "F" RG59/6/ & Belden 8281/ 1694A/ and 1505A	2649
SMA/SMB/Mini 59 BNC & TNC/Mini-UHF	2653
Coax-Check® Remote tester	1565

CoaxReady™ Deluxe Kit

With this kit a technician is set to tackle most coaxial cabling challenges! Perfect for the LAN/Ethernet or video installation installer. For a wide variety of coaxial connectors including mini-coax applications, CoaxReady™ combines our most popular tools with the new LC CST coax stripper in a handy zippered case. This kit includes:

Paladin Tools

Description	Part Number
CoaxReady™ Kit	901054

Kit Contains

Description	Part Number
KT8 round cable cutter	900265
LC CST-58/59 coax stripper	1255
1300 crimp tool frame with EZI-CHANGE™ thumb screws	1302
Die Sets:	
BNC/TNC - RG58/59/62 AU	2034
BNC/TNC - RG58/59/62 AU, RG6 Teflon/Plenum	2075
SMA/SMB/Mini 59 BNC & TNC/Mini-UHF	2653

Ultimate Tool Bag

Paladin Tools

This bag is the most compact and versatile tool bag on the market. It is lightweight, compact, and flexible; it totes like a tool box or can be carried on your shoulder. It is the only bag with a removable inner tote toole caddy that keeps small tools in-view and at-hand. The UTB has a sturdy bottom so you can set the bag upright and it stays without flopping over. The design idea originated with a smart home installer who needed his techs to literally carry everything and this bag will do just that!

Technical

Weight	1kg (2.20 lbs)
Dimensions - Main bag (closed)	
(mm)	279 H x 216 W x 152 D
(in)	11 H x 8.5 W x 6 D
Dimensions - Inner tote (closed)	
(mm)	152.4 H x 152.4 W x 279.4 D
(in)	6 H x 6 W x 4.35 D

Part Number	4923

Test Equipment

PC Cable-Check™ Pro

Paladin Tools

This new universal tester maps cables, detects good connections, opens, shorts or crosses. It works with over 20 types of cables including: LAN & telephone, Serial, coaxial, USB, VGA, Mini-USB, S-video, FireWire, PS/2 keyboard & parallel printer.

Features

- Auto scan or manual scan modes
- Rubber feet to grip to desk or bench to prevent slipping
- Power shuts off after 30 seconds of non-use to conserve battery
- Rugged case now with built-in handle for easy transport
- 9V battery included
- Tests cables with the following terminations:
  - Modular plugs: RJ45, RJ11, RJ12 UTP/STP
  - Coaxial: BNCs & CATV "F" (BNC-to-F adapter required; not included)
  - D-sub: 9-, 15- & 25-pin
  - HD-sub: 15-pin
  - USB: A, B, & mini 5-pin
  - 1394 FireWire: 4- & 6-pin
  - Centronics: 36-pin printer

Advantages

- Universal tester for all computer cables
- Quickly & easily troubleshoot or map cable pin-out
- Easy to read & understand with LED indicator lights
- True cable mapping
- Affordable diagnostic tool

Part Number	1577

Coax Check® Remote

Paladin Tools

Test coax cables installed in walls! Remote continuity tester for 50 and 75 ohm coaxial cables including RG58, RG59 and RG62AU.

Features

- Tests remote cables installed through walls
- Tests 50 ohm cables up to 1000 ft (305 meters) and 75 ohm cables up to 600 ft (183 meters)
- Tests N-type, TNC-type, C-type and "F" connectors using BNC adaptors
- Identifies open conductor, open shield/braid and shorted connections with simple Pass/Fail indicator
- Includes 75 ohm BNC adapter and F/F BNC adapter
- BNC socket connection
- 9-volt battery included

Part Number	1565

Coax Check®

Paladin Tools

Easy-to-read display! Local continuity tester for 50 and 75 ohm coaxial cables including RG58, RG59, RG62AU, RG6 AND RG6QS.

Features

- Tests local coax patch cables
- Tests 50 ohm cables up to 1000 ft (305 meters) and 75 ohm cables up to 600 ft (183 meters)
- Identifies open conductor, open shield/braid and shorted connections with simple Pass/Fail indicator
- Tests BNC-type, TNC-type, N- and C-type, and "F" connectors using BNC adaptors
- BNC socket connection
- 9-volt battery included

Part Number	1560

LAN ProNavigator™ Tester

Paladin Tools

Test data & telephone cable for proper pairing for EIA/TIA-568A & B, Token Ring, 10 Base T & common Cat5,Cat5e, Cat6 configurations. Also tests continuity of 50 & 75 ohm coaxial cables with BNC terminations.

Features

- One-button, simple testing (PASS/FAIL or fault find) to detect: good connections, opens, crossed wires & split pairs
- Traces wires with tone & remote lights
- Quick fault analysis
- Compact & lightweight
- Comfortable to hold
- Low battery test
- Auto-off to preserve battery
- Lanyard holes embedded in case to attach to wrist or belt

Advantages

- Combination UTP/STP & coaxial cable tester for patch cords or installed cable runs
- Simple PASS/FAIL test results in one second - quickly move on the next test site
- Test status lights at both ends (main unit & remote)
- Generates oscillating audio tone for use with tone probes tolocate cables
- Includes 9V battery & belt clips

Part Number	1543

LAN / Voice System Installation Tools

Patch-Check™ Tester

Performs true cable mapping! Local continuity tester for telephone and data cables with RJ11 and RJ45 modular plugs.

Paladin Tools

Advantages

- Tests local patch cords
- Tests cables up to 305 ft (100 meters)
- Identifies open,crossed and shorted connections
- Tests RJ11 DEC-MMJ connectors using adapter couplings (not included)
- Identifies connector & cable pin-out using true cable mapping, not pairing
- Push-button operation
- Unshielded RJ45 modular-plug socket connection
- 9-volt battery included

Part Number	1529

LAN Cable-Check™

Continuity tester for UTP and flat satin cables with RJ45 terminations. Tests both data & telephone connection schemes including patch cords & installed cables.

Paladin Tools

Features

- Identifies good connections, opens, shorts & cross-connections
- Two scan speeds: slow or fast
- Two RJ45 patch cords included
- 9V battery included
- Contained in durable nylon carrying case with belt loop

Note: Will also test RJ11 connections with RJ11 adapter which is not included.

Part Number	1574

Pattern Generator: VGA / DVI / HDTV

HRT

Description	Part Number
PC/HDTV Video test Pattern Generator with DVI, VGA and component outputs	DVC - 3 - U

LAN & A/V Cable-Check

Quickly and easily test RJ45, cable TV "F", RCA, and BNC cabling used in smart home installations.

Paladin Tools

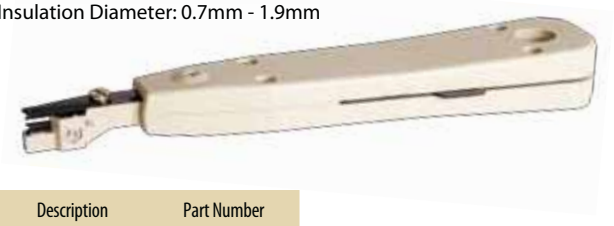
Part Number	1594

Connection Tools

Professional wiring tool for terminating all Disconnection, Connection and Earth Modules. Performs termination and cutting of wire in one action. Cutting function can be disengaged for looping or bus applications.

MADISON TECHNOLOGIES

Conductor Diameter: 0.4mm - 0.6mm
Insulation Diameter: 0.7mm - 1.9mm



Description	Part Number
Non Sensor Type	MT-TLKR
Sensor Type	6 417-2-055-01

SurePunch® Pro

Features

Paladin Tools

- Rubber-embedded cushioned handle with finger grips for comfort
- Adjustable HI/LO spring compression for all cable types
- LO=27.5 lbs (122 N) & HI=37.5 lbs (167 N)
- Uses all twist-and-lock-style blades
- Retracting and locking spudger, hook & pick
- Spudger cleans debris from panel or can be used as a screwdriver or IDC contact insertion tool
- Hook feeds wire through holes
- Pick separates bonded twisted pair cable or strips and cuts wires
- Blade storage area in end of tool with comfortable latch cover
- Complete blade assortment available

Advantages

- Terminates all cable types with a single punch - including 23 AWG Cat6
- Advanced spring mechanism requires less hand force to actuate
- Detachable light with long-life LED focuses light on panel work area
- Luminous intensity of LED is 2200 mcd & light lasts approximately 1 million hours

Description	Part Number
SurePunch® Pro PDT Handle Only	3589
SurePunch® Pro PDT Handle & Light	3590
SurePunch® Pro PDT with 110 Blade & Light with Batteries	3596
SurePunch® Pro PDT -Kron LSA Blade & Light	3599
SurePunch® Pro PDT with 110 Blade	3592
SurePunch® Pro PDT with Kron LSA Blade	3595
SurePunch® Pro PDT Detachable Light	4599
SurePunch® Pro PDT Double 110 Blade	3585
SurePunch® Pro PDT with Double 110 Blade & Light	3584

SurePunch® Pro PDT

Wire Stripper

Specifically designed to easily measure, strip and cut UTP cables. Easy to use and economical, this handy stripper includes a 110-style punch tip and a length guide for gauging correct strip length. For RJ11 and RJ45 unshielded twisted pair wiring.

Part Number	MTWIRESTRIPPER

Modular Plug Crimping Tool

All-in-One Pro Telephone Tool (AMP-style). 4-, 6- and 8-position modular telephone plugs. Does everything from CAT-3 to CAT-6

Part Number	1540

Optical Fibre Tools

Cutting and Stripping Tools

Description	Part Number
Kevlar Scissors - Economy	1511
Kevlar Scissors – Ceramic Blade	1510
Economy Fibre Optic Strippers	1162
Adjustable Jacket Stripper	1161

1511

1162

1161

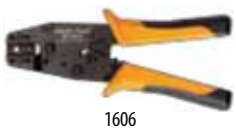
Crimp Tools

Paladin Tools 1600 Series Premium crimper features a range of die sets to suit many popular optical fibre connectors.

Tools

Description	Part Number
1600 Series Professional Crimp Frame Only	1600
SMA/SMB/FC Biconic FO 1600 Series Crimper	1614
SC & ST Fibre Optic 1600 Series Crimper	1668
SC Fibre Optic 1600 Series Crimper	1606

1600



1606

Fibre Die Sets for 1600

	Description	Part Number
	SC Fibre Optic Die for 1600 Series Crimper	2044
	SC & ST Fibre Optic Die for 1600 Series Crimper	2668

Racks, Cabinets and Cable Management

Racks & Rack Frames - 142

External Accessories - 143

Internal Accessories - 144

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Racks, Cabinets and Cable Management

Madison Technologies supplies a versatile range of racking, cabinets and associated accessories for the Telecommunications, Data communications and Broadcast / AV industries. Cabinets can be ordered by selecting frames, sides, doors and accessories, or more simply built up cabinet, single part number solution.

Racks & Rack Frames

Rack Frames

Features

- Multi function rack frame
- Available in 19" (600mm) and 23" (760mm) widths
- Fully assembled and configered with accessories
- Robust construction
- Wide range of accessories
- Various cooling options
- Flush fitting lockable side panels
- Range of lockable metal, perforated and glass doors available
- 760mm width converted for 19" equipment allows for extra space for proper side cable management
- Standard colour - Black Texture

19" (600mm) Wide Frames

Depth(mm)	Height				
	18RU	27RU	39RU	46RU	52RU
	944mm H	1343mm H	1877mm H	2188mm H	2457mm H
600	2019-18600	2019-27600	2019-39600	2019-46600	-
700	2019-18700	2019-27700	2019-39700	2019-46700	-
850	2019-18850	2019-27850	2019-39850	2019-46850	2019-52850
900	2019-18900	2019-27900	2019-39900	2019-46900	-
1000	-	2019-271000	2019-391000	2019-461000	2019-521000
1200	-	-	2019-391200	2019-461200	2019-521200

23" (760mm) Wide Frames

Depth(mm)	Height		
	27RU	39RU	46RU
	1343mm H	1877mm H	2188mm H
600	2065-27600	2065-39600	2065-46600
700	2065-27700	2065-39700	2065-46700
850	2065-27850	2065-39850	2065-46850
900	2065-27900	2065-39900	2065-46900
1000	-	2065-391000	2065-461000

Note: Racks are supplied with plain top and four vertical angles.
Doors, side panels, cooling options and accessories have to be ordered to suit rack frame.
Height shown includes a top panel of 20mm.

Complete Racks

Features

- Complete with frame
- Lockable metal rear door
- Lockable removable side panels
- Plain top
- Front and rear mounting angles

Depth (mm)	39RU	46RU
600	MT-2019-39600	MT-2019-46600
900	MT-2019-39900	MT-2019-46900

Note: Front door is not supplied and must be ordered separately.

Server Racks

The Server Rack is a standard 19" or 23" rack frame.

Features

- Fully compatible with all makes of mountable servers using hardware supplied by manufacturer or alternatively our mounting hardware
- Range of doors mounted on outside of frame for additional space
- Perforated glass panel door
- Fully perforated door (doors must be specified)
- Flush fitting lockable quick removal side panels (sides must be specified)
- Top panels can be fan fitted, vented or raised (please specify when placing order)
- Secure environment for servers
- Bottom frame allows for front and rear cable entry
- Standard colour - Black Texture
- Full range of accessories available for 19" server frame only

19" (600mm) Wide Server Frame Only

Depth(mm)	Height	
	39RU	46RU
	1877mm H	2188mm H
900	2019-39900	2019-46900
1000	2019-391000	2019-461000
1200	2019-391200	2019-461200

23" (760mm) Wide Server Frame Only

Depth(mm)	Height	
	39RU	46RU
	1877mm H	2188mm H
900	2065-39900	2065-46900
1000	2065-391000	2065-461000
1200	2065-391200	2065-461200

Note: Racks are supplied with plain top and four vertical angles. Doors, side panels, cooling options and accessories have to be ordered to suit rack frame.

Doors - Network Cabinets

Features

- Mounted with lift off aluminium hinges
- Range of handles and locking options
- All doors supplied hinged on left unless otherwise specified
- Doors will fit both front and rear of rack
- Plain metal doors can be vented

Metal

Height RU	Solid		Perforated	
	19″	23″	19″	23″
18	2019-18-DRM	-	-	-
27	2019-27-DRM	2065-27-DRM	-	-
39	2019-39-DRM	2065-39-DRM	2019-39-DRVE	2065-39-DRVE
46	2019-46-DRM	2065-46-DRM	2019-46-DRVE	2065-46-DRVE
52	2019-52-DRM	-	2019-52-DRVE	-

Glass Panel

Height RU	Clear Glass		Tinted Glass
	19″	23″	19″
18	8519-18-DRC/G	-	8519-18-DRT/G
27	201 9-27-DRC/G	-	2019-27-DRT/G
39	2019-39-DRC/G	2065-39-DRC/G	2019-39-DRT/G
46	2019-46-DRC/G	2065-46-DRC/G	2019-46-DRT/G
52	2019-52-DRC/G	-	2019-52-DRT/G

Perspex Panel

Height RU	Clear Perspex	Tinted Perspex
	19″	19″
18	8519-18-DRC/PX	8519-18-DRT/PX
27	2019-27-DRC/PX	2019-27-DRT/PX
39	2019-39-DRC/PX	2019-39-DRT/PX
46	2019-46-DRC/PX	2019-46-DRT/PX
52	2019-52-DRC/PX	2019-52-DRT/PX

Doors - Network Cabinets (cont.)

Mesh Panel

Height RU	Mesh Panel		Split Perforated	
	19″	23″	19″	23″
27	2019-27-DRMES	-	-	-
39	2019-39-DRMES	2065-39-DRMES	2019-39-BRN/VE	2065-39-BRN/VE
46	2019-46-DRMES	2065-46-DRMES	2019-46-BRN/VE	2065-46-BRN/VE
52	2019-52-DRMES	-	-	-

Doors - Server Cabinets

Metal - Fully Perforated

Height RU	19″	23″
39	2019-39SV-DRVE	2065-39SV-DRVE
46	2019-46SV-DRVE	2065-46SV-DRVE

Perforated Frame

Height RU	Clear Glass		Clear Perspex	Split Perforated
	19″	23″	19″	19″
39	2019-39SV-DRC/G	2065-39SV-DRC/G	2019-39SV-DRC/PX	-
46	2019-46SV-DRC/G	2065-46SV-DRC/G	2019-46SV-DRC/PX	2019-46SV-BR/VE

Side Panels

Features

- All panels fitted with locks and are easy to remove
- All panel mount flush with corner posts
- Panels can be ordered with pressed vents at top and bottom

Depth (mm)	Panel Height				
	18RU	27RU	39RU	46RU	52RU
600	SPN-18600	SPN-27600	SPN-39600	SPN-46600	-
700	SPN-18700	SPN-27700	SPN-39700	SPN-46700	-
850	SPN-18850	SPN-27850	SPN-39850	SPN-46850	SPN-52850
900	SPN-18900	SPN-27900	SPN-39900	SPN-46900	-
1000	-	SPN-271000	SPN-391000	SPN-461000	SPN-521000
1200			SPN-391200	SPN-461200	SPN-521200

Note: For Vented Sides, select order code TPN-VENTS x number of vents required

Top Covers

Rack frame includes plain top panel screwed directly to the top frame thus reducing ingress of dust but limiting airflow. Options for improved ventilation include raised tops, vented tops or fans fitted into the top panel.

Vent Kit

Features

- Vented Top Panels are designed for use with fan trays, and allows for vertical discharge of air

Part Number	TPN-VENTS

Raising Up Kit

Features

- Raised Top Panels allow natural or external forced ventilation to escape

Part Number	ACC-RAISE-KIT

Fan Kit

Features

- Fan units can be fitted directly into the top panel of the rack, saving the cost of an additional fan tray
- Supplied fully wired for 240V AC with 3m moulded 3-pin plug
- Up to 8 fans can be fitted to a top panel

Part Number	FAN-DIA120-KIT

Shelves

Fixed Shelves

Features

- Shelves are designed to carry up to 40kg
- Fitted into racks and cabinets it provides a rigid storage facility
- Different depths may be incorporated in the same rack
- Ideal for mounting of components such as modems and non 19" equipment
- Heavy-duty shelves to carry up to 80kg can be specified, and come complete with a heavy-duty shelf support bracket
- Standard shelves will carry up to 40kg fitted into an Argent rack, mounting plates must be attached on the inside of the vertical mounting member to lock into position as designed, to prevent turning

Depth	Plain		Vented	
	19"	23"	19"	23"
400mm	2019-SH-400	2065-SH-400	2019-SH-400V	2065-SH-400V
450mm	2019-SH-450	2065-SH-450	2019-SH-450V	2065-SH-450V
580mm	2019-SH-580	2065-SH-580	2019-SH-580V	2065-SH-580V
750mm	2019-SH-750	2065-SH-750	2019-SH-750V	2065-SH-750V

Cantilever Shelves

Features

- May be fixed at either the front or the rear of the cabinet
- Designed to carry up to 25kg
- Front fold on shelf is 15mm deep

Description	19"	23"
1RU x 300mm Deep	2019-CLSH-1U300	-
2RU x 300mm Deep	2019-CLSH-2U300	2065-CLSH-2U300
2RU x 350mm Deep	2019-CLSH-2U350	2065-CLSH-2U350
2RU x 400mm Deep	2019-CLSH-2U400	-
2RU x 450mm Deep	2019-CLSH-2U450	2065-CLSH-2U450
3RU x 300mm Deep	2019-CLSH-3U300	2065-CLSH-3U300
3RU x 350mm Deep	2019-CLSH-3U350	2065-CLSH-3U350
3RU x 400mm Deep	2019-CLSH-3U400	2065-CLSH-3U400
Cantilever Shelf Bracket	ACC-CANT/SH-BKT	

Note: Cantilever bracket secures product to prevent sliding back on shelf

Telescopic Shelves

Features

- Occupying 1RU of panel space
- Sliding shelves are used to support equipment requiring frequent access
- Supplied with slides designed to carry up to 40kg

Depth	19″	23″
400mm	2019-SH-400TEL	2065-SH-400TEL
450mm	2019-SH-450TEL	2065-SH-450TEL
700mm	2019-SH-700TEL	2065-SH-700TEL

Sliding-Swivel Keyboard Shelves

Features

- Occupying 2RU of panel space
- Designed to hold keyboard in place
- Pivoting on shelf through 360 degrees so as to slide the keyboard past the vertical members for storage
- Includes heavy duty slides extending to 400mm or 700mm

19″	23″
2019-SH-KBRD	2065-SH-KBRD

Console Drawer

Features

- Available in 3 sizes for storage space

Description	19″
2RU x 400mm Drawer	2019-DRW-2RU400
3RU x 400mm Drawer	2019-DRW-3RU400
4RU x 400mm Drawer	2019-DRW-4RU400

Note: Cantilever bracket secures product to prevent sliding back on shelf

Blank Panels

Features

- Black powder coated finish
- Available in six different sizes
- Plain or vented
- Custom sizes available on request

Plain

Size (RU)	Part Number
1RU	BPNL-19-01U
2RU	BPNL-19-02U
3RU	BPNL-19-03U
4RU	BPNL-19-04U
5RU	BPNL-19-05U
6RU	BPNL-19-06U

Vented

Size (RU)	Part Number
1RU	BPNL-19V-01U
2RU	BPNL-19V-02U
3RU	BPNL-19V-03U

Earth Bars

Features

- Earth Bars are a 12mm x 3mm
- Rectangular copper bar, manufactured with 6mm tapped holes at 100mm centres for mounting and attaching earth points

Size	Part Number
27RU, 1200mm	ACC-27-1200E
39RU, 1500mm	ACC-39-1500E
46RU, 2000mm	ACC-46-2000E
52RU, 2270mm	ACC-52-2270E

Cage Nuts and Bolts

Features

- Necessary for mounting of equipment into racks and cabinets

Description	Part Number
Cage Nut	MT190CN
Bolt to suit Cage Nut, with Washer	MT190CB
Fixing Kit (Nut, Bolt and Washer) Ea	ACC-FIX-KIT
Fixing Kit (Black Nut, Bolt and Washer) Ea	ACC-FIX-KIT-BLACK

Baying Up Kits

Features

- Kit comprising 4 spacers and fixings for baying up two or more racks side by side
- Cabinets to be bayed together before mounting of equipment

Description	Part Number
Baying Up Kit (4 pieces)	ACC-BAY-KIT

Castors and Levelling Feet

Features

- Where mobility is required a set of 4 castors are available
- Carry weight 400kg per set
- Levelling feet may be ordered for installation on uneven surfaces

Description	Part Number
Castor Set	ACC-CSTR-KIT
Levelling Feet Set	ACC-LEVEL-KIT
Castor and Levelling Feet Combination	ACC-CSTR-L/KIT

Cooling Options

Fan Trays

Features

- Fan units can be fitted either to top or bottom of frames
- Supplied fully wired for 240V AC with 3 metre lead standard and 10A 3 pin moulded plug
- Up to 8 fans may be fitted pending on depth of rack to allow for maximum ventilation where required
- Each fan is 120mm square 38mm high and has an airflow capability of 3.01m^3

Description	Depth	Part Number
Panel Fan Tray, 19", 4 Fans Fitted	850mm	FTR-19850-4F
Panel Fan Tray, 19", 6 Fans Fitted	850mm	FTR-19850-6F

1RU Panel Fan Trays

Features

- Occupying 1RU of space, these are useful where there are isolated "hot spots" or for general cooling
- Up to 6 fans may be installed in each tray
- Supplied fully wired for 240V AC

Description	Part Number
1RU Fan Tray - 6 Fans	2019-FANTR-1U/6

Fan Panel Unit

Features

- Occupying 3RU of vertical rack space
- Used where front to back air movement is required
- Fully wired for 240V AC

Description	Part Number
Horizontal Fan Panel 3RU - 3 Fan	FTR-HOR-343F
Horizontal Fan Panel 1RU - 4 Fan	2019-FAN-1RU

Power Rails

Features

- Fan units can be fitted either to top or bottom of frames
- Full range of vertical and horizontal power rails are available
- Wired for a maximum total load of 10 amp
- Supplied with 2 metres of flexible cable, and a 10A 3 pin plug
- Energy Office Approval number CS6003N applies

Options

- 10 amp and 15 amp plug on lead
- 10 amp captive plug
- 15 amp captive plug
- 20 amp captive plug - round or flat pin
- Neon light
- 10, 15 and 20 amp circuit breakers
- On/off switch
- Extra lead length

Horizontal

Description	Height	Part Number
Horizontal 6 Outlet 10A	50mm	PB-HOR6-10A
Horizontal 12 Outlet 10A	140mm	PB-HOR12-10A
Horizontal 12 Outlet IEC	50mm	PB-HOR12-IEC
Horizontal 16 Outlet IEC	50mm	PB-HOR16-IEC

Vertical

Description	Height	Part Number
Vertical 8 Outlet 10A	800mm	PB-VERT8-10A
Vertical 12 Outlet 10A	1200mm	PB-VERT12-10A
Vertical 18 Outlet 10A	1730mm	PB-VERT18-10A
Vertical 20 Outlet 10A	1730mm	PB-VERT20-10A
Vertical 18 Outlet IEC	1200mm	PB-VERT18-IEC

Conversion Brackets

Features

- 23" wide racks for mounting wider equipment can be partly or fully converted to provide for 19" mounting widths
- Wider rack conversions are also used where a high density of cabling is to be catered for
- Extra space can be provided on either side or one side only
- Cable trays and ducting can be supplied to mount in this space if required

Part Number	Height	Number Required
CONV-BRKT-6519	27RU	12
CONV-BRKT-6519	39RU	12
CONV-BRKT-6519	46RU	16
CONV-BRKT-6519	52RU	18

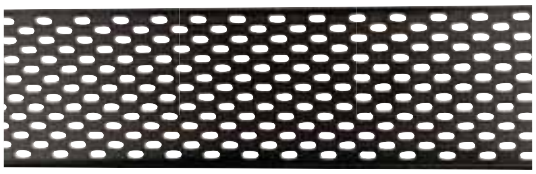
Cable Management

Cable Trays

Features

- Vertically mounted cable trays are suitable for mounting in all racks
- Manufactured from steel and powder coated
- Slotted to enable cables to be neatly strapped at any position

Panel Height	Width (mm)			
	100	150	200	300
27RU	CTR-27-100M	CTR-27-150M	CTR-27-200M	CTR-27-300M
39RU	CTR-39-100M	CTR-39-150M	CTR-39-200M	CTR-39-300M
46RU	CTR-46-100M	CTR-46-150M	CTR-46-200M	CTR-46-300M
52RU	CTR-52-100M	CTR-52-150M	CTR-52-200M	CTR-52-300M



Cable Management Bars

Features

- Fitted horizontally in either back or front of rack for cable management
- 1RU or 2RU high to fit 19" racks
- Black powder coated zincanneal
- Plastic cable clips

Description	Part Number
4 Ring, 1RU	MT2401BK
5 Ring, 1RU	MT2401-5BK
5 Ring, 2RU	MT2405

Closed Cover Cable Management

Features

- Fitted horizontally in either back or front of rack for cable management
- 1RU or 2RU high to fit 19" racks
- Black powder coated zincanneal with slotted finger ducts fitted to base plate

Description	Part Number
1RU	MT2401-CV
2RU	MT2405-CV

Velcro Ties

Features

- 20mm length, Black
- Supplied in packs of 25

Length	Part Number
200mm	MT8100-200
300mm	MT8100-300

Cable Management Rings

Features

- Used for vertical management of cables to rack frame
- 1RU or 2RU
- Powdercoated steel
- Black

Height (RU)	Dimensions	Part Number
1RU	58mmW x 79mmD	MT2407
1RU	58mmW x 89mmD	MT2417
1RU	86mmW x 78mmD	MT2418
2RU	108mmW x 78mmD	MT2406
2RU	80mmW x 78mmD	MT2408
2RU	40mmW x 81mmD	MT2409

Wall Mounts & Open Racks

Wall Mount Cabinets

Features

- Steel construction available in 6RU, 12RU and 18RU heights and various depths
- Finished in texture black powder coating - other colours available on request
- 19" mounting rails fully adjustable for depth
- Top and bottom ventilated sides
- Lockable lift off front door in clear perspex or steel can be selected
- Optional choice of hinged swing frame or can be mounted directly on wall
- Maximum safe working load 30kg

Cabinets

Description	Height	Depth	Width	Part Number
6RU x 350mm Deep	319mm	350mm	552mm	6019-06-350CAB
6RU x 450mm Deep	319mm	450mm	552mm	6019-06-450CAB
6RU x 600mm Deep	319mm	600mm	552mm	6019-06-600CAB
12RU x 400mm Deep	585mm	400mm	552mm	6019-12-400CAB
12RU x 500mm Deep	585mm	500mm	552mm	6019-12-500CAB
12RU x 600mm Deep	585mm	600mm	552mm	6019-12-600CAB
18RU x 500mm Deep	852mm	500mm	552mm	6019-18-500CAB
18RU x 600mm Deep	852mm	600mm	552mm	6019-18-600CAB
6RU Swing Frame Only	319mm	60mm	552mm	6019-06-SWFR
12RU Swing Frame Only	585mm	60mm	552mm	6019-12-SWFR
18RU Swing Frame Only	852mm	60mm	552mm	6019-18-SWFR

Front Doors for Cabinets

Height (RU)	Metal	Acrylic
6RU	6019-06-DRM	6019-06-DRC/PX
12RU	6019-12-DRM	6019-12-DRC/PX
18RU	6019-18-DRM	6019-18-DRC/PX

Wall Mount Swing Frame

Swing frames are an alternative to wall mount cabinets when extra depth is not required, and space is tight.

Features

- Black powder coat finish
- Supplied with fixing kits for mounting of equipment

Part Number	Height (RU)	Depth	Width
MT19021	2RU	100mm	552mm
MT19022	2RU	200mm	552mm
MT19023	2RU	300mm	552mm
MT19041	4RU	100mm	552mm
MT19042	4RU	200mm	552mm
MT19043	4RU	300mm	552mm
MT19061	6RU	100mm	552mm
MT19062	6RU	200mm	552mm
MT19063	6RU	300mm	552mm

Open Frame Data Racks

Features

- Manufactured in 2 heights with a U shaped channel construction
- Sturdy flanged base
- Designed for the mounting of 19" equipment and patch panels
- Offers all round accessibility
- Ideal for data communications rooms
- Can be joined with cable management channel

Rack Height	Data Channel Rack (Complete)	Connecting Channel
39RU	LR-DATA-39CPL	LR-DATA-39C/CHN
46RU	LR-DATA-46CPL	LR-DATA-46C/CHN

LAN, Voice Network and Optical Fibre Connectivity

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Patch Panels

Madison Technologies range of Category 5E and Category 6 RJ45 Patch Panels and Outlets is a comprehensive selection of products enabling the successful installation of a Category 5E compliant or Category 6 cabling system. All components in this range feature universal wiring for either T568A or T568B, can be terminated with a Krone-LSA termination tool and are ACA compliant.

24 Port Patch Panel

Type	Part Number	Colour
Cat5E	MT54524EM	Charcoal Grey
Cat6	MT64524M	Black

MT54524EM

MT64524M

50 Way Voice Patch Panel

A high density 1RU 50 way panel for termination of voice backbone cabling.

Part Number	MT4550

Outlets

RJ45 Clip-in Jack

Category 5E

Suits	White	Black
Clipsal	MT54501C	MT54501CBK
HPM	MT54501H	MT54501HBK

Category 6

Suits	White	Black
Clipsal	MT64501C	MT64501CBK
HPM	MT64501H	MT64501HBK

RJ45 Surface Mount Box

Category 5E

Type	Part Number	Dimensions (mm)	Colour
Single	MT51045E	56 x 44 x 28	White
Dual	MT52045E	60 x 56 x 28	White

MT51045E

MT52045E

Ethercon RJ45 Data Connectors

The EtherCon® Series is a ruggadised and lockable RJ45 connector system, optimized for proaudio, video and lightning network applications.

EtherCon® Cable Connector Carriers

The EtherCon® cable connector carriers upgrade a conventional RJ45 connector to an extremely robust lockable solution. Two different versions allow the protection of already assembled or unassembled RJ45 connectors.

RJ45 Cable Carrier for preassembled RJ45 plugs

Consists of
- Shell
- Fixing disk
- Chuck
- Bush
- Boot

Nickel	Black Chromium
NE8MC	NE8MC-B

Cable Connector

Consists of
- Shell
- Fixing disk
- Chuck
- Bush

Collinox	Black Chromium
NE8MC-1	NE8MC-B-1

EtherCon® A-Series

The all plastic A-Series offers the most space saving and cost effective design.

Features

- A-Series cutout with latch lock
- Maximum panel thickness 3mm

PCB Mounts RJ45 Receptacle

Horizontal PCB Mount	Vertical PCB Mount	Vertical PCB Mount plus 2 screw-domes
NE8FAH	NE8FAV	NE8FAV-SD

Panel Mount RJ45 Receptacle with Terminals

Panel Mout with IDC 110 Punch Down Terminals	Panel Mount with IDC Terminals
NE8FAV-Y110	NE8FAV-YK

Ethercon ® CAT6 Chassis Connectors

The Ethercon Cat6 D-shape panel connectors with metal housing and secure latching system offer a tool-free and gas-tight IDC termination, which makes cable assembly easy and fast.

Features

- CAT6 compliant – data rate up to 10 GBit/s
- CAT6 performance – fast data transmission and high bandwidth applications
- CAT6 specifications according TIA / EIA 568B, ISO / IEC 11801, EN 50173
- IP65 - Dust and waterproof in mated condition
- Shielded system - high noise immunity and EMI protection
- Push Pull mating - secure and proven locking system
- Ground lead jumper on panel connector with selectable g rounding option
- Gas-tight IDC termination without tool

Ethercon RJ45 Data Connectors (Cont.)

Part Number	Description
NE8FDY-C6	D-shape CAT6 panel connector with Nickel housing
NE8FDY-C6-B	D-shape CAT6 panel connector with black Chrome housing

EtherCon® B-Series

The B-Series offers a space saving design, rugged metal front plate and fully shielded versions.

Features

- B-Series cutout with latch lock
- Maximum panel thickness 3 mm
- Fully shielded PCB Mounts - closed metal housing avoid EMI or cross talking

PCB Mounts RJ45 Receptacle

Vertical PCB Mount	Horizontal PCB Mount
NE8FBV	NE8FBH

PCB Mounts RJ45 Receptacle

Fully Shielded PCB Mount	Fully Shielded PCB Mount with 2 light pipes for standard 3 LED
NE8FBH-S	NE8FBH-LED

EtherCon® D-Series

The D-Series series offers the most rugged design of the EtherCon® Series and is perfectly suitable for panel mount into a standard "D" size cutout.

Features

- D-shape metal flange with latch lock
- Maximum panel thickness 4mm

Vertical PCB Panel Mount RJ45 Receptacle

Nickel	Black
NE8FDV	NE8FDV-B

Panel Mount Receptacle with Terminals

Panel Mount With	Nickel	Black
IDC 110 Punch Down Terminals	NE8FDV-Y110	NE8FDV-Y110-B
IDC Punch Down Terminals	NE8FDV-YK	NE8FDV-YK-B

Ethercon RJ45 Data Connectors (Cont.)

RJ45 Feedthrough Receptacale

Nickel	Black
NE8FDP	NE8FDP-B

Feedthrough Coupler for cable extensions

Part Number	NE8FF

LAN Cable

Madison Technologies offers a full selection of solid and stranded UTP, STP and S-FTP cables to Category 5E and Category 6 specifications. The full range, including colour options, can be found in Section 1–Cable–of this catalogue. Popular items are listed again below.

Category 5E & Category 6

Part Number	Description	Category	Colour	Length
UTPL5EBL305B	4 Pair Solid	5E	Blue	305
UTPL6305RB	4 Pair Solid	6	Blue	305
UTPL5EMTPBL	4 Pair Stranded	5E	Blue	305
UTPL6MTPBL	4 Pair Stranded	6	Blue	305

UTPL5EBL305B

Patch Leads

RJ45 Patch Leads

Madison Technologies category 5E and category 6 RJ45 patch leads are for interconnection between patch panels, outlets and equipment.

Length (m)	Cat5E	Cat6
0.5	MTEL45450.5XX*	MT6L45450.5XX*
1.0	MTEL45451.0XX*	MT6L45451.0XX*
1.5	MTEL45451.5XX*	MT6L45451.5XX*
2.0	MTEL45452.0XX*	MT6L45452.0XX*
3.0	MTEL45453.0XX*	MT6L45453.0XX*
5.0	MTEL45455.0XX*	MT6L45455.0XX*
10.0	MTEL454510.0XX*	MT6L454510.0XX*

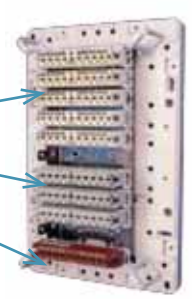
*Note: Replace XX in part number with one of the following for cable colour: BL=Blue, WH=White, RD=Red, YL=Yellow, GN=Green, GY=Grey

IDC Modules and Accessories

Modules

For 22.5mm backmount frames - standard punch down tooling.

Description	Part Number
Disconnection Module, 10 Pair	MT24040
Connection Module, 10 Pair	MT24041
TRC Earth Module	MT24042



Overvoltage Protection Magazine

Empty	Loaded
MT24050	MT24051

MT24050 MT24051

Gas Arrestors

3 Electrode type to suit MT24050 unloaded cartridge above.

230V	350V
MT24030-230	MT24030-350

Label Holders

Frames for indvidiual labelling of distributor bays

Holder Type	Part Number	Attaches to
Frame	MT24060	Industry Standard Backmount Frames
Hinged	MT24061	Madison Technologies 10 Pair Modules

Note: Includes White label

Wiring Tools

Professional Wiring tool for terminating all Diconnection, Connection and Earth Modules. Performs termination and cutting of wire in one action. Cutting functions can be disengaged for looping or bus applications.

Conductor Diameter: 0.4mm - 0.9mm
Insulation Diameter: 0.7mm - 1.9mm

Description	Part Number
Sensor Type	6417-2-055-01
Non-Sensor Type	MT-TLKR

Mounting Frames

Madison Technologies Jumperable Frames and Covers cater for both MDF and IDF applications. All of the frames are ACA compliant and all are based on Industry Standard Backmount Frames.

Frames are constructed from 1mm passivated ZINCANNEAL or stainless steel and covers are two-tone plastic, lockable.

Jumperable Frames

11 Way

11 Way	Part Number	Dimensions (mm) H x W x D
Frame	MT27101-110	375 x 190 x 75
Cover	MT27901-110	403 x 200 x 120

27 Way

27 Way	Part Number	Dimensions (mm) H x W x D
Frame	MT27101-270	760 x 190 x 75
Cover	MT27901-270	785 x 200 x 120

66 Way

66Way	Part Number	Dimensions (mm) H x W x D
Wall Mount	MT27060	1525 x 230 x 200
Jumper Ring Kit	MT27061	-

19" Backmount Frames

9 Way and 15 Way Recessed

RU	MAX Pairs	Part Number	Dimensions (mm) H x W x D
2	90	MT192509	483 x 87 x 74
3	150	MT192515	483 x 132 x 74

MT192509 MT192515

Internal Distribution Enclosures

Distribution Enclosures are used at or beyond the network boundary as Main Distribution Frames (MDF's), Intermediate Distribution Frames (IDF's) and/or Final Distribution points (FDP's). The following products are for internal use and are ACA Compliant.

Internal Plastic Distribution Enclosures

Intermediate / Final Distribution Frame (IDF/FDF)

IDF/FDF Type	Part Number	Dimensions (mm) L x W x H	Modules Included
10 Pair	MT24000-010i	180 x 60 x 50	Yes
20 Pair	MT24000-020i	160 x 143 x 53	Yes
30 Pair	MT24000-030i	170 x 140 x 82	No

MT24000-010i MT24000-020i MT24000-030i

Internal Plastic Distribution Enclosures (cont.)

Main Distribution Frames (MDF)

MDF Type	Part Number	Dimensions (mm) L x W x H	Modules Included
10 Pair	MT24000-010M	160 x 143 x 80	Yes
50 Pair	MT24000-050M	210 x 160 x 90	No
100 Pair	MT24000-100M	320 x 210 x 120	No

MT24000-010M

MT24000-050M

MT24000-100M

Record Book and Cards

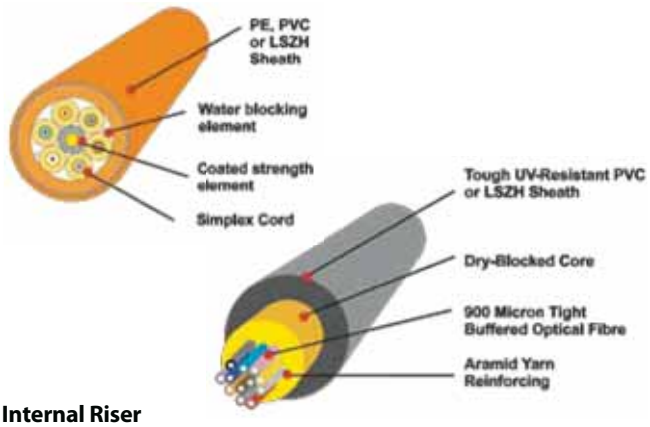
Description	Part Number
20 Pair Record Card	MT27991
60 Pair Record Card	MT27992
100 Pair Record Card	MT27993
1200 Pair Record Book	MT27990

Optical Fibre Connectivity

The Madison Technologies range of optical fibre products incorporates cables, enclosures and a broad selection of connectors, pigtails, patchcords and accessories. As well as the standard length patchcords listed here, we offer a fast turn-around service on any length patchcord or pigtail to your specification.

Cable

Manufactured by Optimal Cables in Australia, the following standard cables are available. Please contact Madison Technologies for options outside of this range.



Internal Riser

Description	Part Number
Multi Mode, 62.5um (OM1), PVC Sheath	ORAP62AA0**
Multi Mode, 50um (OM3), PVC Sheath	ORAP53AA0**
Single Mode, G652 (OS1), PVC Sheath	ORAP10AA0**

Internal Heavy Duty Riser

Description	Part Number
Multi Mode, 62.5um (OM1), PVC Sheath	OCAP62AA0**
Single Mode, G652 (OS1), PVC Sheath	OCAP10AA0**

Cable (cont.)

Internal/External Riser

Description	Part Number
Multi Mode, 62.5um (OM1), PVC Sheath	OWAP62AA0**
Multi Mode, 50um (OM3), PVC Sheath	OWAP53AA0**
Single Mode, G652 (OS1), PVC Sheath	OWAP10AA0**

External Single Loose Tube

Description	Part Number
Multi Mode, 62.5um (OM1), Polyethylene Sheath	OQDU62AA0**
Multi Mode, 50um (OM3), Polyethylene Sheath	OQDU53AA0**
Single Mode, G652 (OS1), Polyethylene Sheath	OQDU10AA0**

Note: ** Denotes core count

Enclosures

Wall Mount Enclosures

Lockable wall mount enclosure for splicing and/or direct termination.

MAX Port	ST/FC	DSC	SSC
12 Port	MT30612ST	MT30612DSC	MT30612SSC
48 Port	MT30648ST	MT30648DSC	MT30648SSC

MT30612ST

19" Rack Mount Enclosures

Fixed

Type	ST/FC	DSC
1RU 24 Port, With Lid	MT30915	MT30916
1RU 24 Port , Without Lid	MT30924ST	MT30924DSC

MT30915

Hinged

Type	ST/FC	DSC
1RU 24 Port	MT30901ST	MT30901DSC
2RU 48 Port	MT30902ST	MT30902DSC

MT30902ST

Connectors and Adaptors

Madison Technologies offers an "off the shelf" range of optical fibre connectors and through adaptors.

ST

Description	Part Number
ST Connector, Multi Mode	MTSTMM
ST Connector, Single Mode	MTSTSM
ST Through Adaptor, Multi Mode	MTSTADTMM
ST Through Adaptor, Single Mode	MTSTADTSM
ST/SC Adaptor, Multi Mode	MTSTSCADTMM
ST/SC Adaptor, Single Mode	MTSTSCADTSM

MTSTMM

MTSTCADTMM

Connectors and Adaptors (cont.)

SC

Description	Part Number
SC Connector, Multi Mode	MTSCMM
SC Connector, Single Mode	MTSCSM
SC Angled Polished Connector	MTSCAPC
SC Through Adaptor, Duplex, Multi Mode	MTDSCADTMM
SC Through Adaptor, Duplex, Single Mode	MTDSCADTSM
SC Through Adaptor, Simplex, Multi Mode	MTSSCADTMM
SC Through Adaptor, Simplex, Single Mode	MTSSCADTSM
SC Simplex Angled Polished Through Adaptor	MTSSCAPCADTSM
SC Duplex Angled Polished Through Adaptor	MTDSCAPCADTSM

MTSTADTMM / MTSTADTSM

MTSSCAPCADTSM

MTSCAPC

FC

Description	Part Number
FC Connector, Single Mode	MTFCSM
FC Through Adaptor	MTFCADTSM

MTRJ

Description	Part Number
MTRJ Plug	MTRJ
MTRJ Through Adaptor	MTRJADT

Patchcords and Pigtails

Madison Technologies offers an off the shelf range of optical fibre patchcords to suit most common applications. Other connector types, together with specific cable types, may be available upon request. Please contact Madison Technologies for your specific patchcord and pigtail requirements.

Patchcords

Description	Lengths Available				Part Number
Duplex, ST-ST, Multi Mode	1	2	5	10	MTPCDSTDSTMM**
Duplex, ST-ST, Single Mode	1	2	5	10	MTPCDSTDSTSM**
Duplex, SC-SC, Multi Mode	1	2	5	10	MTPCDSCDSCMM**
Duplex, SC-SC, Single Mode	1	2	5	10	MTPCDSCDSCSM**
Duplex, SC-ST, Multi Mode	1	2	5	10	MTPCDSCDSTMM**
Duplex, SC-ST, Single Mode	1	2	5	10	MTPCDSCDSTSM**
Duplex, LC-LC, Multi Mode	1	2	5	10	MTPCDLCDLCMM**
Duplex, LC-LC, Single Mode		2	5		MTPCDLCDLCSM**
Duplex, LC-SC, Multi Mode	1	2	5	10	MTPCDLCDSCMM**
Duplex, LC-SC, Single Mode		2	5		MTPCDLCDSCSM**
Duplex, LC-ST, Multi Mode	1	2	5	10	MTPCDLCDSTMM
Duplex, MTRJ-MTRJ, Multi Mode	1	2	5		MTPCDLCDSTMM**
Duplex, MTRJ-SC, Multi Mode	1	2	5		MTPCMTRJMTRJMM**
Duplex, MTRJ-ST, Multi Mode	1	2	5		MTPCMTRJSCMM**

** Denotes Length

Pigtails

Description	Lengths Available	Part Number
Pigtail, ST-PC, Single Mode	2	MTPTSTPCSM2.0
Pigtail, SC-PC, Single Mode	2	MTPTSCPCSM2.0
Pigtail, SC-APC, Single Mode	2	MTPTSCAPCSM2.0
Pigtail, LC-PC, Single Mode	2	MTPTLCPCSM2.0

Accessories

Splice Cassettes

Can house up to 12 splices. Splice combs, covers and hinges need to be added as per following accessories. Can be stacked together if more than 12 splices are to be housed.

Colour	Part Number	Dimensions (mm) L x W x H
White	R30279	155 x 95 x 8

Splice Cassettes (cont.)

Splice Cassette Covers

Optional cover for R30279 splice cassette above.
Attached with red hinge.

Colour	Part Number	Cover suitable for
White	R30278	Cover Splice Cassette (R30279)

Splice Cassette Hinges

For stacking splice cassettes or adding optional covers.

Colour	Part Number	Suitable for
Red	R30005-RT	Splice Cassettes and Covers
Green	R30005-GU	Splice Cassettes and Covers
Blue	R30083-BL	Stacking Splice Cassettes

Splice Protectors

Heatshrink Splice Protector

With stainless steel strength member included, these protectors include a polyoletin outer sleeve, Ethylene Vinyl acetate inner sleeve, and provide a moisture resistant barrier after shrinkage.

Size	Part Number
45mm	MTHSFSPF45
60mm	MTHSFSPF60

Splice Comb

A 6 way comb to house heatshrink splice protectors inside splice cassette.

Part Number	MT30045

Optical Fibre Tools

Cutting and Stripping Tools

Description	Part Number
Kevlar Scissors - Economy	1511
Kevlar Scissors – Ceramic Blade	1510
Economy Fibre Optic Strippers	1162
Adjustable Jacket Stripper	1161

1511

1162

1161

Optical Fibre Tools (cont.)

Crimp Tools

Paladin Tools 1600 Series Premium crimper, as detailed in section 9 of this catalogue (tools and test equipment) features a range of die sets to suit many popular optical fibre connectors.

Tools

Description	Part Number
1600 Series Professional Crimp Frame Only	1600
SMA/SMB/FC Biconic FO 1600 Series Crimper	1614
SC & ST Fibre Optic 1600 Series Crimper	1668
SC Fibre Optic 1600 Series Crimper	1606

1600

1606

Fibre Die Sets for 1600

	Description	Part Number
	SC Fibre Optic Die for 1600 Series Crimper	2044
	SC & ST Fibre Optic Die for 1600 Series Crimper	2668

Glossary Of Terms

AC — Alternating current. Electric current that alternates or reverses polarity in a cyclical manner (e.g. 50 Hz AC power).

ACR — Attenuation Crosstalk Ratio. The difference between attenuation and crosstalk, measured in dB, at a given frequency. Important characteristic in networking transmission to assure that signal sent down a twisted pair is stronger at the receiving end of the cable than are any interference signals imposed on that same pair by crosstalk from other pairs.

AES/EBU — Informal name of a digital audio standard established jointly by the AES (Audio Engineering Society) and EBU (European Broadcast Union) organizations.

Analogue — Representation of data by continuously variable quantities as opposed to a finite number of discrete quantities in digital.

Analogue Signal — An electrical signal which varies continuously, not having discrete values. Analogue signals are copies or representations of other waves in nature. An analogue audio signal, for instance, is a representation of the pressure waves which make up audible sound.

Attenuation — The decrease in magnitude of a signal as it travels through any transmitting medium, such as a cable or circuitry. Attenuation is usually expressed logarithmically as the ratio of the original and decreased signal amplitudes. It is usually expressed in decibels (dB).

Attenuation Crosstalk Ratio (ACR) — the difference between attenuation and crosstalk, measured in decibels (dB), at a given frequency. Important characteristic in networking transmission to assure that signal sent down a twisted pair is stronger at the receiving end of the cable than are any interference signals imposed on that same pair by crosstalk from other pairs.

Audio — A term used to describe sounds within the range of human hearing (20 Hz to 20 kHz). Also used to describe devices which are designed to operate within this range.

AWG — American Wire Gage. A wire diameter specification. The smaller the AWG number, the larger the wire diameter.

Balanced — In audio, a signal utilizing two conductors, generally referred to as positive and negative, in addition to a shield (or ground.) The main advantage of a balanced signal is that noise introduced into the line is common to both the positive and negative conductors, and arrives at its destination out of phase, where it effectively cancels itself.

Banana Plug — A single conductor electrical connector with a banana-shaped spring-metal tip most often used on audio power amplifiers for the loudspeaker wiring.

Bandwidth — In audio, the range of frequencies that a device can process or pass; the human ear has a bandwidth of 20Hz–20kHz. In radio and television transmission, the range of frequencies occupied by one channel of information; a television broadcast channel occupies a band of frequencies 6MHz wide. In digital, the maximum bit rate a system is capable of conveying; the bandwidth of a FireWire 400 connection is 400Mbps.

Belflex® — A premium hybrid matte-finish jacket material that exhibits superior flexibility at low temperatures along with resistance compared to standard PVC jacketing materials.

Beldfoil® — Belden trademark for highly effective electrostatic shield of reinforced metallic foil.

BNC — Abbreviation for "Bayonet Neil-Concelman." A coaxial cable connector used extensively in video and RF applications and named for its inventors.

Braid — A group of textile or metallic filaments interwoven to form a tubular flexible structure which may be applied over one or more wires or flattened to form a strap.

Broadband — The technique used to multiplex multiple networks on a single cable without interfering with each other. Technologies that allow you to transmit or receive higher volumes of data at higher speeds.

Bulkhead Connector — Connector designed to be inserted into a panel cutout from the rear of the panel, thus forming part of the barrier between the two spaces. Back-mounted.

Butted Contact — When two conductors come together end-to-end, but do not overlap, with their axis in line.

Cable Assembly — A completed cable and its associated hardware (e.g. connector).

Capacitance — The ability of a dielectric material between conductors to store energy when a difference of potential exists between the conductors. The unit of measurement is the farad. Cable capacitance is usually measured in picofarads (pF).

Capacitive Crosstalk — Cable crosstalk or interference resulting from the coupling of the electrostatic field of one conductor upon one or more others.

Capacitive Reactance — The opposition to alternating current due to the capacitance of a capacitor, cable or circuit. It is measured in ohms and is equal to 1/(2*pi*f*C) where pi is approximately 3.1416, f is the frequency in Hz and C is the capacitance in farads.

Capacitor Microphone — An alternate, less-used term for condenser microphone.

Cardioid Microphone — A microphone with a directional pickup pattern that is most sensitive to sounds coming from the front and sides while rejecting sounds coming from the rear. The pickup pattern is roughly heart-shaped when viewed from above, hence the name "cardioid."

Condenser Microphone — A microphone that picks up sounds via an electrically charged, metallized diaphragm, which is separated from a conductive back plate by a thin air layer. Sound waves striking the diaphragm cause a minuscule voltage change, which is increased by a tiny amplifier circuit within the mic body. Because power is required by both the microphone capsule and the amplifier, condenser microphones must have a power source, which can be a battery inside the mic body or "phantom" power from a mixing console or external power supply.

CATV — Abbreviation for Community Antenna Television. Cable TV.

CCTV — Closed-circuit television.

Cellular Polyethylene — Expanded or "foam" polyethylene, consists of individual closed cells of inert gas suspended in a polyethylene medium. The result is a desirable reduction of the dielectric constant compared to solid polyethylene, which decreases attenuation and increases the velocity of propagation.

Characteristic Impedance — In a transmission cable of infinite length, the ratio of the applied voltage to the resultant current at the point the voltage is applied. Or the impedance which makes a transmission cable seem infinitely long, when connected across the cable's output terminals.

Chassis — In patchbays, a unit in which all wiring is enclosed in a box, or chassis, as opposed to configured as a harness.

Coaxial Cable — A cylindrical transmission line composed of a conductor centered inside a metallic tube or shield, separated by a dielectric material, and usually covered by an insulating jacket. Used by cable TV companies to distribute signals to homes and businesses. Also used by telephone companies in some applications and by cellular telephone, radio and television installations.

Component Video — The unencoded output of a camera, video tape recorder, etc., whereby each red, green, and blue video signal is transmitted down a separate cable (usually coax) to improve picture quality. Can also refer to a video system where the luminance and chrominance video components are kept separate.

Composite Cable — Cable having conductors with two or more AWG sizes or more than one cable type.

Composite Video — The encoded output of a camera, video tape recorder, etc., whereby the red, green and blue video signals are combined with the synchronizing, blanking and color burst signals and are transmitted simultaneously down one cable.

Conductivity — The ability of a material to allow electrons to flow, measured by the current per unit of voltage applied. It is the reciprocal of resistivity and is measured in siemens (S) or mhos.

Conductor — A substance, usually metal, used to transfer electrical energy from point to point.

Contact — The conducting part of an interconnect at the interface between the connector and the lead on the device being connected.

Crimp — Act of compressing (deforming) a connector ferrule around a cable in order to make an electrical connection.

Crimping Dies — A term used to identify the shaping tools that, when moved toward each other, produce a certain desirable shape to the barrel of the terminal or contact that has been placed between them. Crimping dies are often referred to as die sets or as die inserts.

Crimping Termination — Connection in which a metal sleeve is secured to a conductor by mechanically crimping the sleeve with pliers, presses or crimp dies.

Crimping Tool — A term commonly used to identify a hand held mechanical device or table press that is used to crimp a contact, terminal or spice.

Cross Talk — A magnetic or electrostatic coupling which causes the unwanted transfer of energy from one circuit (disturbing circuit) to another circuit (disturbed circuit).

Datalene® — Belden trademark for foam polyolefin.

Dielectric — An insulating (nonconducting) medium. It is the insulating material between conductors carrying a signal in a cable. In coaxial cables it is between the center conductor and the outer conductor. In twisted pair cables it is the insulation between conductors plus any surrounding air or other material.

Digital Signal — An electrical signal which possesses two distinct states (on/off, positive/negative).

Drain Wire — A non-insulated wire in contact with parts of a cable, usually the shield, and used in the termination to that shield and as a ground connection.

Dual Bantam — Two Bantam (TT) plugs used in tandem, useful for stereo audio applications.

Duobond® II — Belden trademark for a laminated shielding tape consisting of heat sensitive adhesive, aluminum foil, polyester or polypropylene and aluminum foil.

Duofoil® — Belden trademark for a shield in which metallic foil is applied to both sides of a supporting plastic film.

Dust Cap — A device attached to a connector to provide protection against dust and foreign debris.

Dynamic Microphone — A transducer that relies on the law of induction, with an output proportional to the velocity of a moving element within a magnetic field. The most common type is the moving-coil microphone, which picks up sounds when sound waves strike a diaphragm attached to a coil of wire. When the coil moves within the magnetic structure of the microphone, it creates an output voltage. The process is exactly the reverse of the way a speaker operates. Moving-coil dynamic microphones tend to be extremely rugged, making them well-suited for most sound reinforcement applications. The other common type of dynamic microphone is the ribbon mic.

EIA — Electronic Industries Association (formerly RMA or RETMA).

EPDM — Ethylene-propylene-diene monomer rubber. A chemically cross-linked elastomer with good electrical insulating properties and excellent flexibility at high and low temperatures. It has good insulation resistance and dielectric strength, as well as excellent abrasion resistance and mechanical properties. EPDM as better cut-through resistance than Silicone rubber, which it replaces in some applications.

EPR — Ethylene-propylene copolymer rubber. A material with good electrical insulating properties.

Ferrule — A short tube to make solderless connections to shielded or coaxial cable (e.g. as in crimping).

Fibre Optics — Light transmission through optical fibres for communication and signaling. A technology that transmits information as light pulses along a glass or plastic fibre. Optical fibre carries much more information than conventional copper wire and is generally not subject to interference.

Flame Resistance — The ability of a material not to fuel a flame once the source of heat is removed.

Flexibility — The ability of a cable to bend in a short radius. The ability of a cable to lay flat or conform to a surface as with microphone cables.

Foam Polyethylene — Expanded or "foam" polyethylene, consists of individual closed cells of inert gas suspended in a polyethylene medium, resulting in a desirable reduction of the dielectric constant.

Frequency — The number of times a periodic action occurs in one second. Measured in Hertz.

Gain — The increase of voltage, current, or power over a standard or previous reading. Usually expressed in decibels (dB).

Ground — In electronics, the reference from which system signals are measured. The ground lead usually has "zero potential," or no electric charge, and also provides a path of least resistance to earth (as opposed to through an operator!) should a problem occur.

Ground, Isolated — Describes the grounding scheme of an audio patch panel, whereby the shield of each circuit is isolated from the front panel and each other.

Ground, Bussed — Describes the grounding scheme of an audio patch panel, whereby audio circuits have a common shield, isolated from the front panel and bussed to a ground connector on the rear panel.

Ground, Looped — Describes the grounding scheme of an audio patch panel, whereby each pair of audio circuits has shields common, but isolated from the front panel and adjacent circuits.

Grounds Out — Describes the grounding scheme of an audio patch panel, whereby the shield of each circuit is brought out to the backplane to allow manual normaling of individual positions.

Harness — In patchbays, the length of cable connecting the front panel and backplane. A harness configuration (as opposed to chassis) allows the front and back to be mounted separately, wherever is most convenient. The harness connecting the two can be of any length.

Hertz (Hz) — Unit of frequency equal to one cycle per second.

Hypercardioid — A narrower heart-shaped pick-up pattern than that of cardioid microphones.

IDC — Insulation Displacement Connector. Type of connector where contact is made to the cable conductor(s) by cutting through the individual conductor's insulation. The conductor does not need to have its insulation removed prior to connection. Flat cable often uses IDCs to simultaneously connect all conductors.

Impedance — The total opposition that a circuit offers to the flow of alternating current or any other varying current at a particular frequency.

Inductive Crosstalk — Crosstalk resulting from the coupling of the electromagnetic field of one conductor upon another.

Insulation Displacement Connector (IDC)— A mass termination connector for flat cable with contacts that displace the conductor insulation to complete termination.

Interconnection — Mechanically joining assemblies together to complete electrical circuits.

Interface — The two surfaces on the contact side of both halves of a multiple-contact connector which face each other when the connector is assembled.

Interference — Disturbances of an electrical or electromagnetic nature that introduce undesirable responses into other electronic equipment.

Interlaced — Short for interlaced scanning. A system of video transmission whereby all the odd number lines are delivered followed by all the even numbered lines. These two "fields" combine to form a single frame of video.

Jack — A connecting device into which a plug can be inserted to make circuit connections. The jack may also have contacts which open or close to perform switching functions when the plug is inserted or removed.

Jacket — Pertaining to wire and cable, the outer protective covering that may also provide additional insulation.

LAN — Local Area Network. A data network connecting any number of users, intended to serve a small area. A group of computers and associated devices that shares a common communications line and typically shares the resources of a single processor or server within a small geographic area.

Lead-in — The cable that provides the path for RF energy between the antenna and the receiver or transmitter.

Looping Plug — A two-pronged plug designed as a manual, external normal for a pair of video jacks.

Loss — Energy or signal lost without accomplishing useful work.

Microphone — A device that converts sound pressure variations into electrical signals.

Microphonics — Noise caused by mechanical excitation of a system component. In a single conductor microphone cable, for example, microphonics can be caused by the shield rubbing against the dielectric as the cable is flexed.

Mixing Console/Desk — A signal-management device which receives, combines and balances signals, provides control of volume and tone, and allows routing of signals to selected destinations.

Multicore — Audio or lighting cable containing many bundled leads allowing signal transmission along separate channels. Also known as 'Snake'.

Normaled — A term used to describe a circuit that is completed

Normal, Full (Looped) — A term used in specifying an audio patchbay to indicate internally normaling circuits.

Normal, Full (Out) — A term used in specifying an audio patchbay, indicating normaling circuits that are available externally (on the backplane) to allow manual normaling of individual positions.

Normal, Half — A term used to describe an audio circuit that is normaled through a patchbay, with the additional characteristic that when a patch cord is inserted into the top (source point) of a jack, the signal is split such that it continues through to its normal at the same time it is available to the patch cord. A patch cord inserted into the bottom (destination point) breaks the normal so as to avoid mixing signals from the original source point. Half-normaling is not recommended for use with AES/EBU circuits.

Normal, Half (Looped) — A term used in specifying an audio patchbay to indicate internally normaling, half-normaled circuits.

Normal, Half (Out) — A term used in specifying an audio patchbay, indicating half-normaling circuits that are available externally (on the backplane) to allow manual normaling of individual positions.

Nylon — An abrasion-resistant thermoplastic with good chemical resistance.

Ohm — The unit of electrical resistance. The value of resistance through which a potential difference of one volt will maintain a current of one ampere.

Ohm's Law — Stated E=IR, I=E/R or R=E/I. The current I in a circuit is directly proportional to the voltage E, and inversely proportional to the resistance R.

Omnidirectional — A microphone that picks up sound from all directions.

Paired Cable — Cable with conductors cabled in groups of two.

Patchcord — A flexible piece of cable terminated at both ends with plugs. Used for interconnecting circuits on a patchboard, in a wiring closet or at the work area.

Patch Bay — A panel of jacks (female receptacles) hard-wired to all inputs, outputs and side-chains of outboard equipment, and all outputs and insert points of the mixing console. Often used in recording studios to enable rapid connection of any combination of equipment by the use of 'patch cords', or 'patch leads'.

PE — Polyethylene.

Pin Contact — A male type contact, usually designed to mate with a socket or female contact. It is normally connected to the "dead" side of a circuit.

Plenum — A compartment or chamber to which one or more air ducts are connected and that forms part of the air distribution system. A description for a cable that passes the NFPA 262 (UL-910) CMP flame test requirements.

Plug — In coaxial RF connectors the plug is usually the movable portion, and is usually attached to a cable or removable assembly. Plugs mate with receptacles, jacks, outlets, etc.

Polyethylene (PE) — A thermoplastic material having excellent electrical properties. Low dielectric constant, a stable dielectric constant over all frequencies, very high insulation resistance. In terms of flexibility, polyethylene can be rated stiff to very hard, depending on molecular weight and density — low density being the most flexible and the high-density, high-molecular weight formulation being very hard. Moisture resistance is rated excellent.

Polypropylene (PP) — A thermoplastic similar to polyethylene but stiffer and having a higher softening point (temperature). This material is primarily used as an insulation material. Typically, it is harder than polyethylene. This makes it suitable for thin wall insulations. The dielectric constant is 2.25 for solid and 1.55 for cellular designs.

Polyvinyl Chloride (PVC) — A general purpose thermoplastic used for wire and cable insulation and jackets.

PP — Polypropylene.

Precision Video — Video coaxial cables having very tight electrical tolerances in impedance, velocity of propagation, attenuation and return loss. Used in high quality applications such as live broadcast in network studios and pre- or post-production facilities.

PVC — Polyvinyl Chloride. (See also Polyvinyl Chloride.)

Quad — A four conductor cable. Also called star quad.

Rack Unit — A rack unit is a measurement of height equal to 1.75"or 44.5mm.

Radio Frequency (RF) — Radio Frequency. Includes frequencies from a few kilohertz to several gigahertz. Used to transmit information from point to point over the airwaves or cable.

RCA — An RCA connector is a plug and a jack designed for use with coaxial cable for frequencies ranging from the very lowest up to several megahertz. An RCA connector is sometimes known as a phono plug and jack.

Receptacle — Usually the fixed or stationary half of a two-piece multiple contact connector. Also the connector half usually mounted on a panel and containing socket (female) contacts.

Resistance — In DC circuits, the opposition a material offers to current flow, measured in ohms. In AC circuits, resistance is the real component of impedance, and may be higher than the value measured at DC.

Resonance — An AC circuit condition in which inductive and capacitive reactances interact to cause a minimum or maximum circuit impedance.

Return Loss — Measure of signal reflections from a cable or device with a fixed, standard reference impedance on the measuring equipment. Expressed in decibels (dB).

RG/U — RG is the abbreviation for radio guide, a military designation for a coaxial cable, and U stands for universal.

RGB — Abbreviation for the three parts of colour video signal: red, green and blue. Also refers to multi-coaxial cables carrying these signals. round conductors in the

RJ45 — Modular telecommunications connector.

RS-232 — A standard, unbalanced interconnection scheme for bi-directional serial data communications. The standard originally called for the use of a DB-25 connector, but now allows the smaller DB-9.

RS-422 — A standard, balanced interconnection scheme for data communication over twisted pair. Designed to work over longer distances, in the range of 3000+ feet.

SDI — Serial Digital Interface.

Serial Digital — Digital information that is transmitted in serial form. SDI informally refers to serial digital television signals that conform to the SMPTE 259M standard.

Serial Digital Interface — Informally refers to serial digital television signals that conform to the SMPTE 259M standard.

Sheath — Pertaining to wire and cable, the outer protective covering, also called jacket, that may also provide additional insulation.

Shield — A tape, serve or braid (usually copper, aluminum or other conductive material) placed around or between electric circuits or cables or their components, to prevent signal leakage or interference.

Shield Coverage — The optical percentage of a cable actually covered by shielding material.

Shield Effectiveness — The relative ability of a shield to screen out undesirable interference or prevent signal leakage out of the cable. Frequently confused with the term shield coverage.

Shield Percentage — The percentage of physical area of a circuit or cable actually covered by shielding material.

Shotgun — A highly-directional microphone used for picking up sounds from a distance.

Signal — Any visible or audible indication which can convey information. Also, the information conveyed through a communication system.

Signal Conductor — A conductor in a transmission cable or line that carries electrical signals.

Snake — A connector box that contains a large number of balanced XLR microphone input receptacles.

Snake Cable — A name given to individually shielded or individually shielded and jacketed, multi-pair audio cables. Used in the connection of multi-channel line level audio equipment.

Solder Contact — A contact or terminal with a cup, hollow cylinder, eyelet or hood to accept a wire for a conventional soldered termination.

SpeakOn — A brand name for a type of audio connector developed by Neutrik.

Splitter — A device that sends the signal from one source to two or more receiving devices by allocating a portion of the signal to each receiver (e.g. cable TV splitter). A device that divides a high bandwidth signal into two or more lower bandwidth signals, each carrying a selected frequency range. Users connected to a DSL line, for example, may have a splitter installed at their home or business to divide the incoming signal into low frequencies to send to their phone and high frequencies for data to the computer.

Star Quad — Term given to 4-conductor microphone cables where the conductors are spiraled together, which, when connected in an x configuration, greatly increases common mode noise rejection.

Stage Box — A junction box at the stage end of a multicore equipped with female XLR connectors used for microphone signals destined for a mixing console at the other end. May also contain several male XLR connectors for signals sent back up the multicore from the console.

STP — Shielded Twisted Pair(s).

Stranded Conductor — A conductor composed of several strands or groups of uninsulated wires.

Structural Return Loss — Magnitude of the internal cable reflections, measured in decibels (dB), relative to the actual cable impedance, not the system impedance. Measure of signal reflections caused by the structure of the cable without the additional reflections from any impedance mismatch between the cable and the measuring equipment. Measure of internal cable reflections using a reference impedance in the measuring equipment that is adjusted to the nominal or average impedance of the cable. (See also Return Loss.)

S-Video — Transmission method for video in which the two parts of the signal, the chrominance and luminance, are sent on separate transmission lines to provide better picture quality.

Supercardioid Microphone — A variation of the cardioid microphone that is most sensitive at the front while rejecting sounds entering 150° to the rear.

TCP/IP — Transmission Control Protocol/ Internet Protocol.

TIA — Telecommunications Industry Association. Body which authored the TIA/EIA-568-B Commercial Building Telecommunications Wiring Standard in conjunction with EIA.

Transducer — A device for converting one form of energy to another, such as mechanical energy to electrical energy.

Transfer Impedance — For a specified cable length, transfer impedance relates to a current on one surface of a shield to the voltage drop generated by this current on the opposite surface of the shield. Transfer impedance is used to determine shield effectiveness against both ingress and egress of interfering signals. Cable shields are normally designed to reduce the transfer of interference — hence, shields with lower transfer impedance are more effective than shields with higher transfer impedance.

Transmitter — Equipment that generates RF or electrical signals for transmission through the air or space or over a transmissions line. Also refers to the electronic package that converts electrical energy to light energy in a fibre optic system.

Triaxial Cable — A cable construction having a conductor and two isolated braid shields, all insulated from each other. A coaxial cable with a second braid applied over an inner jacket and an outer jacket applied over the outer braid. Commonly used in television camera systems.

Twinax Cable — Cable with two twisted conductors with established electrical properties (one pair = two conductors sharing a common axis = twinax).

Twisted Pair — Two lengths of insulated conductors twisted together. The traditional method for connecting home and many business computers to the telephone company. Gets its name because two insulated copper wires are twisted together, both of which are needed for each connection. In commercial environments, performance of data transmission can be improved by adding a composite tape to the wire. This is known as shielded twisted pair.

UHF — Ultra High Frequency. International Telecommunications Union designation for the 300 to 3000 MHz band of frequencies.

UL — Underwriters Laboratories. A nonprofit organization which tests and verifies construction and performance of electronic parts and equipment, including wire and cable.

Unbalanced — In audio, a signal passed on two conductors, one of which is usually kept at ground. Noise induced into the line is not cancelled as it is in the case of a balanced circuit. Unbalanced signals are better kept to short runs.

Uni-Directional — A microphone pattern that is more sensitive to sounds coming from one particular direction than from coming from other directions. Sometimes referred to as a "Directional Microphone".

Velocity of Propagation — The speed of an electrical signal down a length of cable compared to speed in free space expressed as a percentage.

VHF — Very High Frequency. International Telecommunications Union designation for the 30 to 300 MHz band of frequencies.

VHS — Abbreviation for Video Home System.

Video Bandwidth — The highest signal frequency that a specific video signal can reach. The higher the video bandwidth, the better the quality of the picture. System components must be able to exceed the bandwidth of the signals they are intended to support.

VLF — Very Low Frequency. International Telecommunications Union designation for the 3 to 30 kHz band of frequencies.

Voltage — Electrical potential of electromotive force expressed in volts.

Voltage Drop — The voltage developed across a component or conductor by the current flow through the resistance or impedance of the component or conductor.

Voltage Rating — The highest voltage that may be continuously applied to a cable construction in conformance with standards or specifications.

WAN — Wide Area Network.

Watt — A unit of electrical power.

Wavelength — The distance between positive peaks of a signal. As the frequency increases, and waves get closer together, the wavelength decreases.

WECO — An abbreviation for Western Electric Company, WECO has come to describe the standard jack used in video patch fields.

XLPE — Crosslinked polyethylene is a thermoset and is crosslinked by radiation, thermally, or by moisture. XLPE offers a wide range of operating temperatures, excellent deformation, abrasion, and flame resistance. XLPE can be formulated with halogenated or non-halogenated flame retardant packages. Some grades are also rated XHHW-2 which offers excellent wet electrical properties.

XLR — A multi-pin audio connector (typically 3 pins) used in microphone, line level and snake cable audio connections.

Z — Symbol for impedance.

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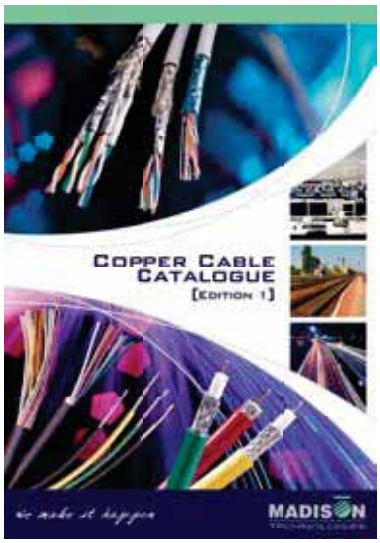
Copper Cable Catalogue



The Copper Cable Catalogue is a handy reference for information on a wide range of cables including data, communications, security, industrial, instrumentation and control and AV cables. It also provides extensive details on world-leading cable solutions from global suppliers such as Belden and R&M.

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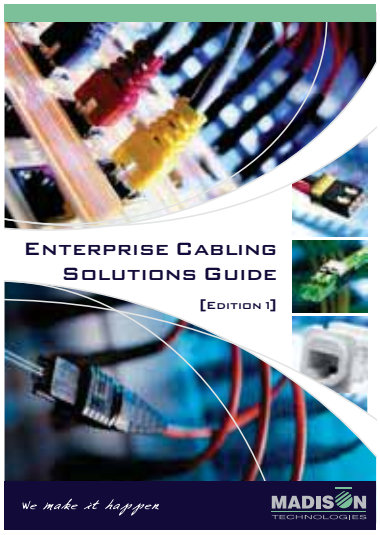

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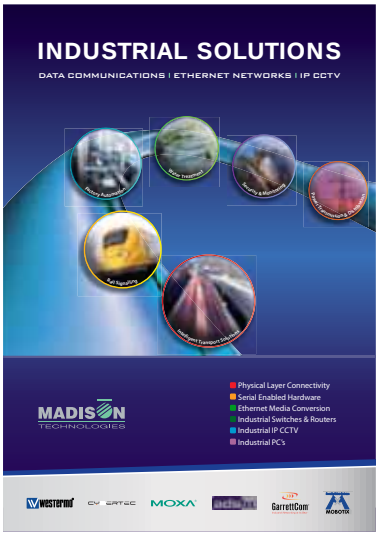

Madison provides Serial, Ethernet and Video data communication solutions across a wide range of industries and applications including manufacturing, process control, mining, engineering and security. Offering an unmatched combination of world's best industrial-grade technologies, our products are backed by extensive local applications knowledge, experience and technical support.

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